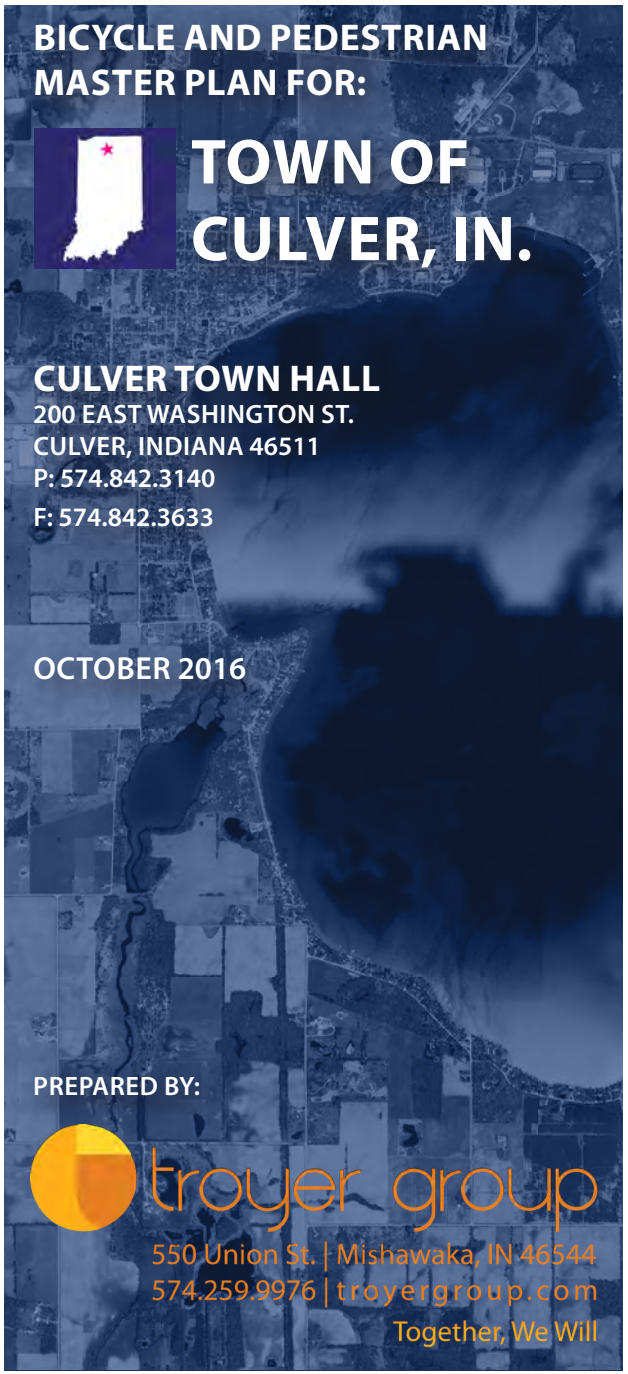
DRAFT

TOWN OF CULVER
BICYCLE AND PEDESTRIAN MASTER PLAN

OCTOBER 2016

ACKNOWLEDGEMENTS



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CLERK/TREASURER
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TOWN COUNCIL
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Margaret Dehne
Jim Faulkner
Chester Gut

BOARD OF ZONING APPEALS
Dan Adams, President
John Helphrey
Margaret Dehne
Bill Harris

KEY CONTRIBUTORS

Mark Damore
Chamber of Commerce

Bob Porter
Culver Utilities Manager

Anna Campbell
Culver Park Superintendent

Jerry Chavez
Marshall County EDC

James Turnwald
Michiana Area Council of Governments

Tracy Fox
Food Nutrition & Policy Consultants

Don Fox
Culver Academies

Dana Neer
Culver Academies

Kevin Berger
Easterday Construction

Chuck Kitchell
Culver Schools Interim Superintendent

A special thank you to the residents of Culver, local business owners, and other groups that provided input during the planning process.

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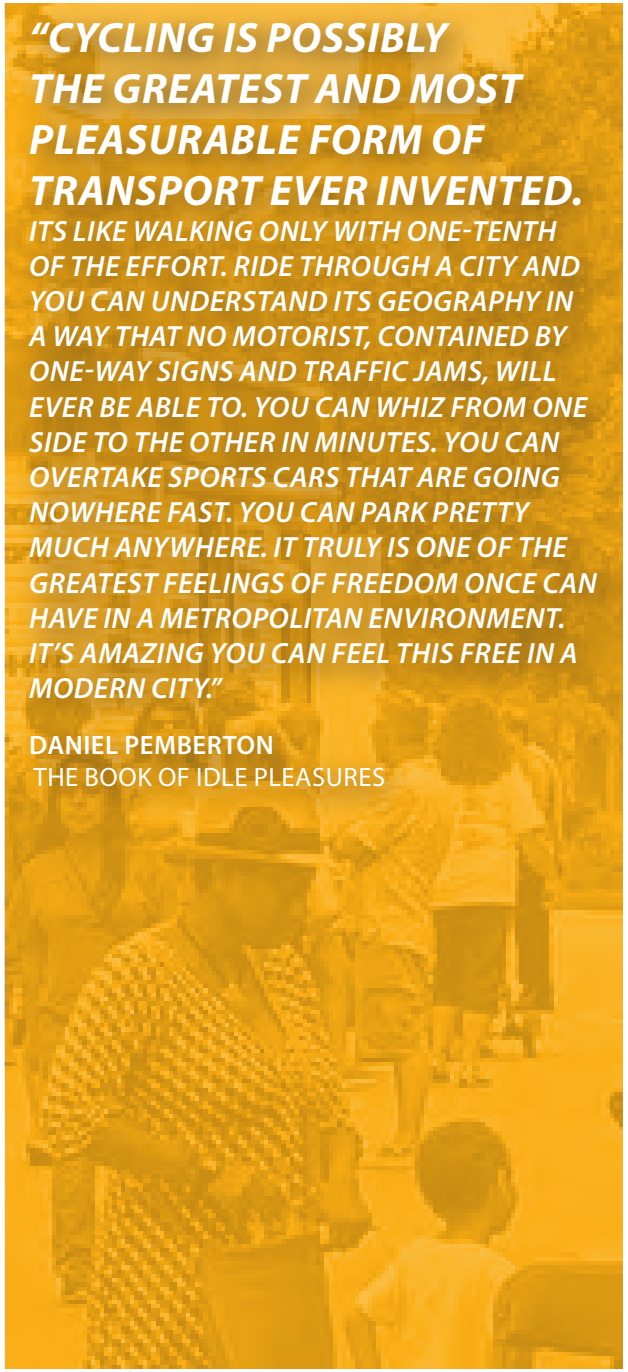

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CHAPTER 1
INTRODUCTION

"The Lake Maxinkuckee Pedestrian Trail will add immense value and wellbeing for all Culver residents and visitors.

One key ingredient to a happy and healthy community is the ability to safely engage in exercise, while enjoying our natural resources. People of all ages will experience significant benefits from walking, running and biking in beautiful Culver and Lake Max."

DANA NEER
WELLNESS DIRECTOR OF THE CULVER ACADEMIES

INTRODUCTION

The qualitative and quantitative benefits of bicycle and pedestrian infrastructure are widely acknowleged and documented. These benefits include improvements to both environmental and overall community health, energy efficiency, and community safety. Additionally, the economic benefits include resident satisfaction and attraction, employment recruitment and retention, as well as creating improvements that encourage development.

Recent initiatives preceding this process include the Culver Comprehensive Plan. This plan identified the priority to develop a regional trail network that connects to Plymouth.

This Master Plan process has the opportunity to provide greater coverage and connectivity of the existing system, leading to greater success

FOR MORE INFORMATION

- **CULVER COMPREHENSIVE PLAN:** AUGUST 2014
- **GOLF CART RULES AND REGULATIONS:** JUNE 2014
- **CULVER COMMUNITY CHARRETTE HANDBOOK**: NOVEMBER 1998

PROJECT PURPOSE

This Master Plan seeks to establish local and regional connectivity for the Culver community, while providing an active recreation centric vision for the town. Utilizing previous plans and current initiatives, it aims to build on that momentum, while supporting the investments the town has already made.

As a tool for the town staff, this plan supports the vision of the community for a more pedestrian and bicycle friendly environment. With a goal of creating a comprehensive network that improves the experience of walking and cycling, this master plan serves as the primary directive for implementing infrastructure through design and policy recommendations.

Ultimately, by improving bicycle and pedestrian infrastructure, Culver will improve public health and quality of life for the town and surrounding community.

GENERAL STRATEGY

Refine The Role Of Bicycle and Pedestrian Infrastructure In The Community

Culver's community culture already encourages pedestrian activity in its relationship to the lake. By scaling that perspective to more specifically address existing and proposed infrastructure, making it more of an asset to the entire community, Culver can better support the culture and strengthen the qualities that make the town unique.

Connect Community And Increase Coverage

Investing in and increasing bicycle and pedestrian infrastructure only makes sense if the implementation encourages usage. Recommendations regarding infrastructure seek to improve the overall function of the system and are specifically aimed at increasing users of the network. Additionally, using connectivity and coverage as performance standards provide specific metrics for the town to measure the success of the system.

Focus On The People

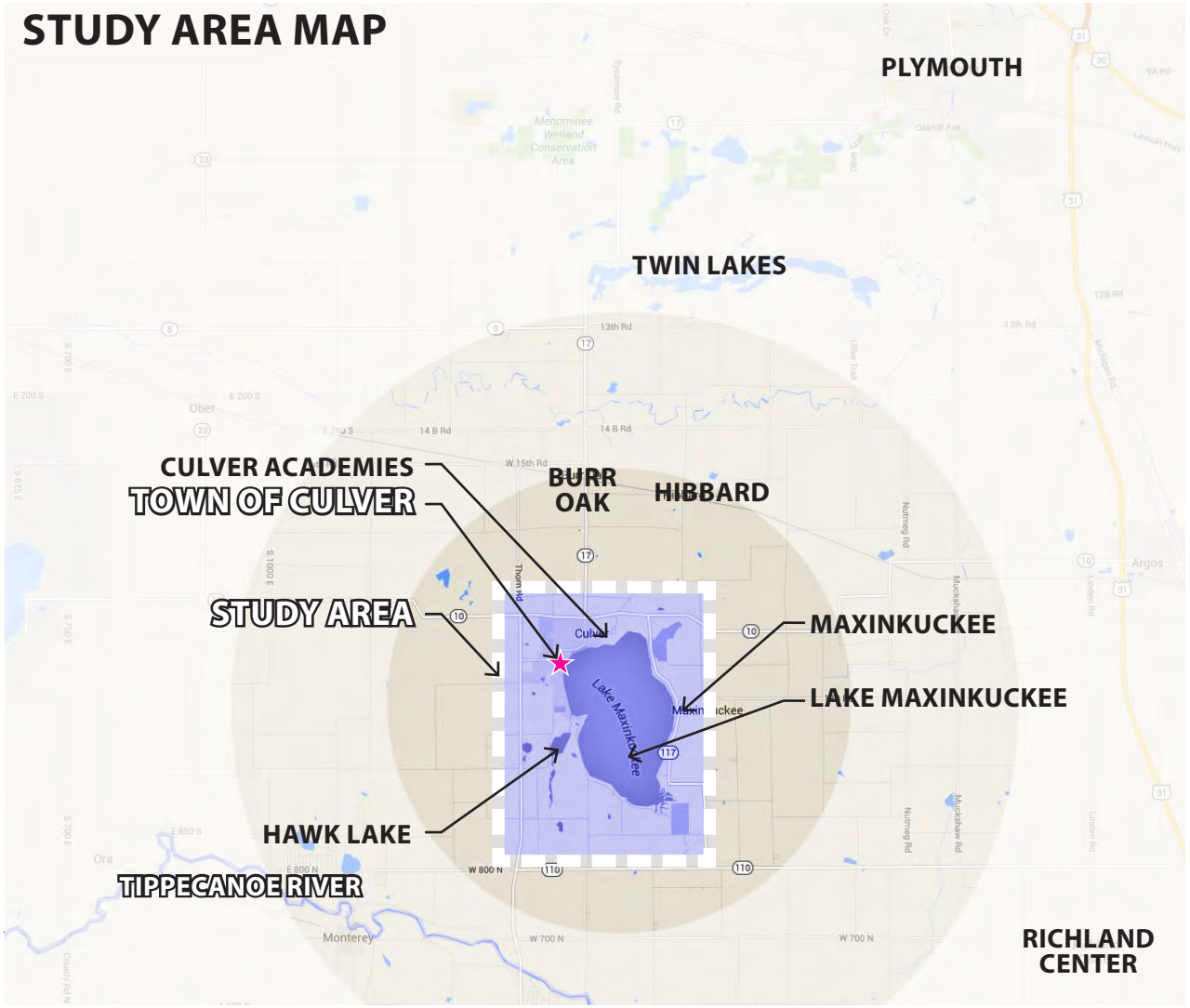
Simply making amendments to vehicular infrastructure limit the potential of bicycle and pedestrian networks. Recommendations made with people as the dominant perspective lend to more successful systems and implementations.

Showcase The Community

Trails highlight the assets of the community. Looking at the Town through the lens of a pedestrian provides a vastly different view of the community than if one sees the community solely from the car. These nuances give authenticity to the community story and contribute to other aspects of growth, such as attractiveness and attachment.

TOWN OF CULVER AND LAKE MAXINKUCKEE - VIA ANTIQUARIAN AND HISTORICAL SOCIETY OF CULVER MUSEUM
HTTP://CULVERAHS.COM/HISTORYGALLERY/WP-CONTENT/UPLOADS/2012/10/CROPPED-BANNER-CULVERAHS2.JPG

STUDY AREA MAP



HISTORY

Culver was originally called Union Town, and under that name was laid out in 1844. It was later renamed for Henry Harrison Culver, head of the Culver Academies.

GEOGRAPHY

Culver is a town in Marshall County, Indiana approximately 9 miles south of the City of Plymouth. Culver is part of Union Township that also includes the communities of Burr Oak, Hibbard, Maxinkuckee and Rutland. According to the 2010 census, Culver has a total area of 0.9 square miles or 568 acres, all land.

The study area for this project is bounded by SR 10 to the North, SR 17 to the West, CR 800N or SR 110 to the South, and Queen Rd. to the East.

LAKE MAXINKUCKEE

Lake Maxinkuckee is the second largest natural lake in Indiana, covering 1,864 acres. It is a kettle lake, fed by 21 underground springs stemming from a highly productive aquifer.

The first inhabitants of the lake area were Mound Builders, most likely the Potawatomi or Miami. Several mounds were built on the banks of the lake, the largest being "Pare Mound," thought to be used as a point of reference for the natives. The first white settlers arrived in 1836. The word Maxinkuckee is derived from the Potawatomi word Mog-sin-ke-ki, which means "big stone country".

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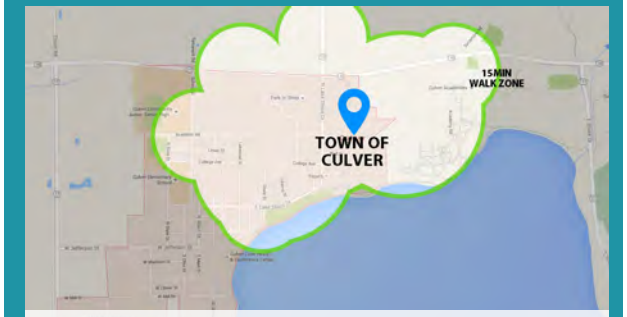
CHAPTER 2
EXISTING CONDITIONS

CULVER, INDIANA

"A SMALL TOWN WITH SURPRISING SOPHISTICATION."

SITE INVENTORY AND ANALYSIS

While the Town of Culver itself has remained the primary focus, the surrounding areas were analyzed as well. An inclusive public process involved community members, stakeholders, and town staff. It uncovered both the critical contextual understanding of the community and identified the future desires for the network.



15 MIN WALK ZONE - VIA WALKSCORE

WALKABILITY:

Walkability Metrics:

- Walk Speed: 3.1mph
- 5 Min. Walk Zone: 1400'
- 10 Min. Walk Zone: 2700'
- 15 Min. Walk Zone: 4100'

Key Walk Zone Connections:

- Culver Academies
- Grocery: Park N'Shop
- Restaurants: 9 locations within 3 mi radius
- Lake Path
- Culver Park

Walk Score: Range 2-32 (out of 100)
Car Dependent - *via www.walkscore.com*
This online resource measures walkability and is based on walking routes to destinations and amenities.

Pedestrian Environment Analysis

Biking: The Culver Existing Signed Bicycle Route shows only one signed bicycle route around the Town, bounded by SR 10 along the north side of Culver, SR 117 along the westside of Lake Maxinkuckee, Shore Dr. along the south portion of the lake, and coming north along Main St. and Lake Shore Dr. to complete the loop. One small spur along School St. also exists.

Walking: With a Walk Score of range of 2-32 out of 100, the Study Area is relatively car dependent with most errands requiring use of a car. The "somewhat walkable" areas within the Town of Culver reflect a greater density in that area and a concentration of amenities.

Universal Access: While a walkthrough audit of sidewalk infrastructure revealed minimal issues with pedestrian travel paths, several of the crossings do not meet current Americans with Disability Act (ADA) standards. These standards include meeting slope specifications for ramps and detectable warning prior to intersections.

Amenities Analysis

Within the study area, nine dining establishments bolster the experience of the community, including restaurants, coffee shops, and bars. Additionally, seven churches are within a 5 mi radius of Culver. seven shopping locations and three locations for groceries also support the town. The town also has a several schools, a conference center, the Culver Union Township Library, a fire station, the town hall, a post office, a pharmacy, and three inns/bed-breakfasts. These amenities mostly cluster in the town itself, a short distance from the lake. To varying degrees, the more connectivity these have to the community bicycle and pedestrian system, the more successful each will be.

Neighborhood Environment Analysis

As of the census of 2010, there were 1,353 people, 598 households, and 354 families residing in the town. The population density was 1,503.3 inhabitants per square mile. There were 897 housing units at an average density of 996.7 per square mile. The majority of the homes are single family oriented, with the Forest Place Senior Apartments being the lone exception. The largest density of houses occurs within the town, south of Academy Rd., north of W Mill St, and east of N Slate St.

Demographics and Social Context Assessment

There were 598 households of which 25.3% had children under the age of 18 living with them. 37.1% of all households were made up of individuals and 17.9% had someone living alone who was 65 years of age or older. The median age in the town was 47.7 years. 19.2% of residents were under the age of 18; 7% were between the ages of 18 and 24; 18.6% were from 25 to 44; 29.6% were from 45 to 64; and 25.6% were 65 years of age or older. The gender makeup of the town was 45.4% male and 54.6% female. The racial makeup of the town was 95.8% White, 1.2% African American, 0.4% Asian, 0.9% from other races, and 1.8% from two or more races. Hispanic or Latino of any race were 2.4% of the population.

"Bring outside people to Culver"

*"Ultimately [this functions as] **a destination around the lake.** Most definitely [we want] as many trails or walks coming into town [as possible]."*

"I am concerned the path from the park to town – if opened to bikes – it will be inhospitable to walkers/ runners."

"NO GOLF CARTS. NO SKATEBOARDS. NO LITTERING."

"It would be nice to connect to other trails and possibly pass by interesting areas where people would visit or go eat, farmers market, etc."

Public Input

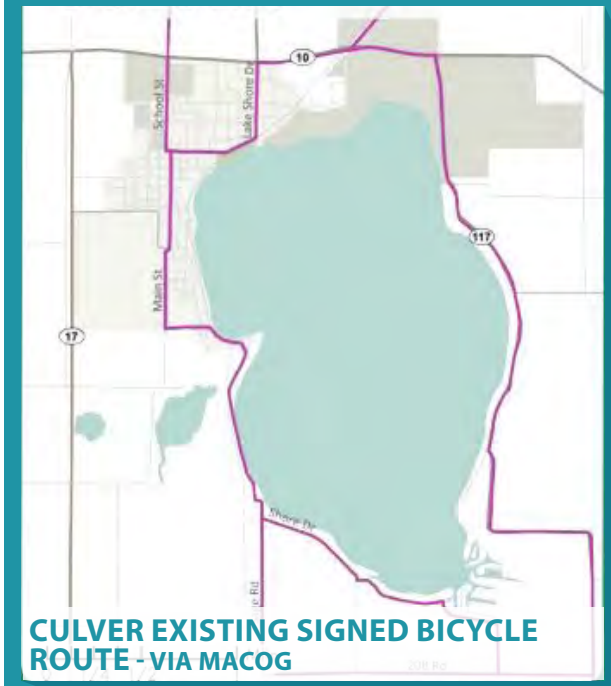
The full catalog of public comments are available in the appendicies

PUBLIC PROCESS

Building on recent planning efforts, such as the Stellar Communities process, will help maintain public engagement. The iterative process of this master plan focuses on people - specifically the residents and business owners of the community - aiding in the plan's development and honing in to the priorities of Culver. As the strategies and projects are implemented, the plan will continue to evolve, while still being driven by the goals and vision, to reflect the current needs of the community.

Community Input

Several opportunities for feedback were offered to both the stakeholders and the public to ensure a transparent, context sensitive, and people driven process. Three focus group meetings and a public input meeting were conducted, with each providing different opportunities for community stakeholders to participate. Community feedback was collected through in-person group discussions, using maps; individual comments, using prompts and post-it notes; and using online tools, such as Wikimapping, which lengthened our feedback period and made feedback opportunities accessible to those who could not attend the public meeting.

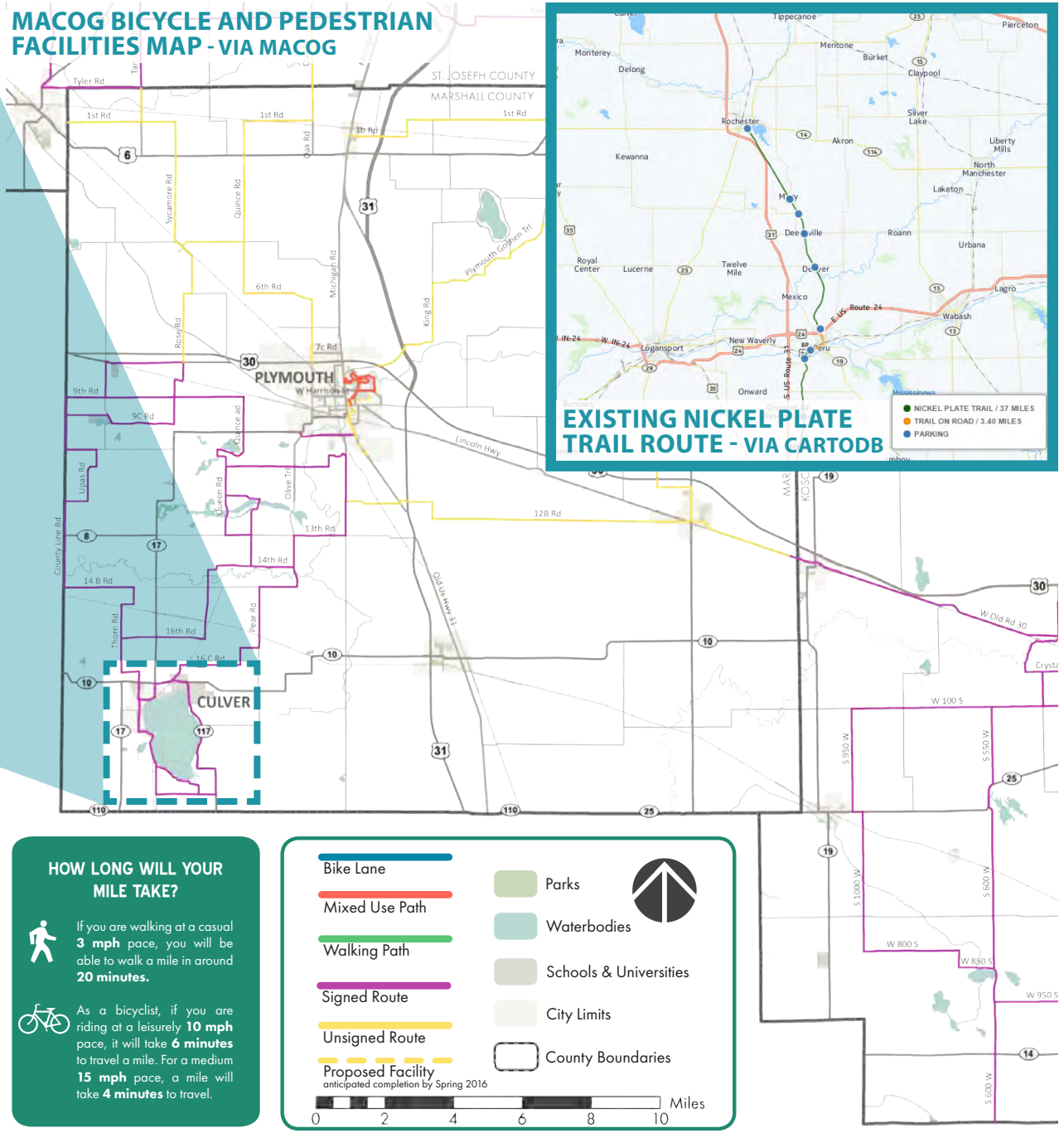


CULVER EXISTING SIGNED BICYCLE ROUTE - VIA MACOG

MICHIANA AREA COUNCIL OF GOVERNMENTS (MACOG)

In the spring of 2015, MACOG published a "Bicycle and Pedestrian Facilities Map" that highlights 5 different types of routes throughout the 4 county area. These routes include bike lanes, mixed-use paths, walking paths, signed routes, and unsigned routes. Proposed facilities, with anticipated completion in 2016, are also portrayed. Around the Town of Culver, portrayed above, a single loop around Lake Maxinkuckee is shown with no proposed facilities depicted. This loop is comprised of only signed routes, with no separated bicycle facilities.

MACOG BICYCLE AND PEDESTRIAN FACILITIES MAP - VIA MACOG



EXISTING NICKEL PLATE TRAIL ROUTE - VIA CARTODB

HOW LONG WILL YOUR MILE TAKE?

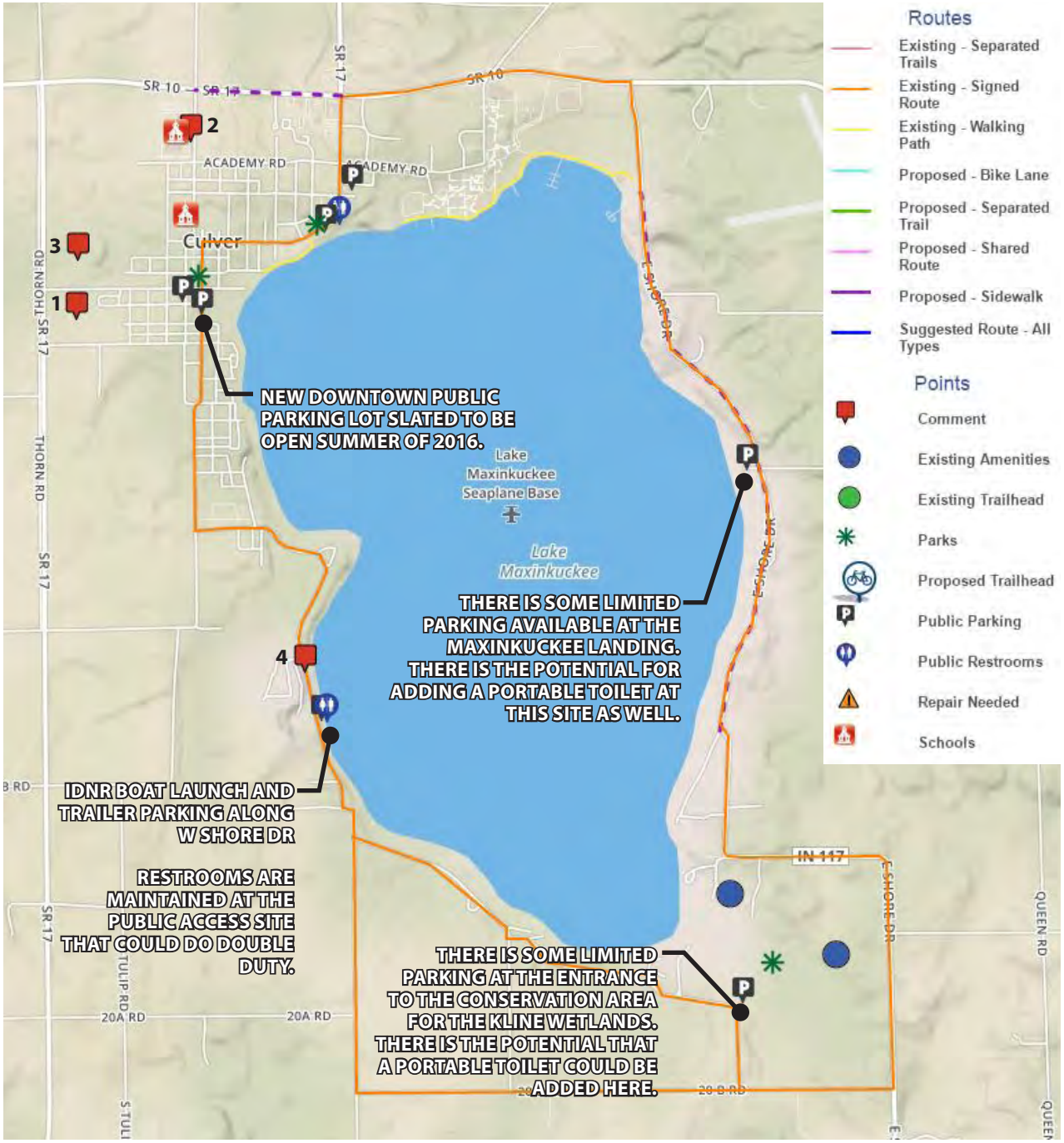
If you are walking at a casual **3 mph** pace, you will be able to walk a mile in around **20 minutes.**

As a bicyclist, if you are riding at a leisurely **10 mph** pace, it will take **6 minutes** to travel a mile. For a medium **15 mph** pace, a mile will take **4 minutes** to travel.

Bike Lane
Mixed Use Path
Walking Path
Signed Route
Unsigned Route
Proposed Facility
anticipated completion by Spring 2016

Parks
Waterbodies
Schools & Universities
City Limits
County Boundaries

0 2 4 6 8 10 Miles



WIKIMAPPING SURVEY

The online cartegraphic software, "Wikimapping" connected the Master Plan process to a broader audience by increasing accessibility and the timeline for feedback. Several key amenities were identified and the specific feedback provided, gives weight to the proposed improvements.

1. Conceptual plans commissioned by the CRC showed maintaining existing wetlands and green space on this parcel which could include walking trails that could be incorporated into the overall trail plan.

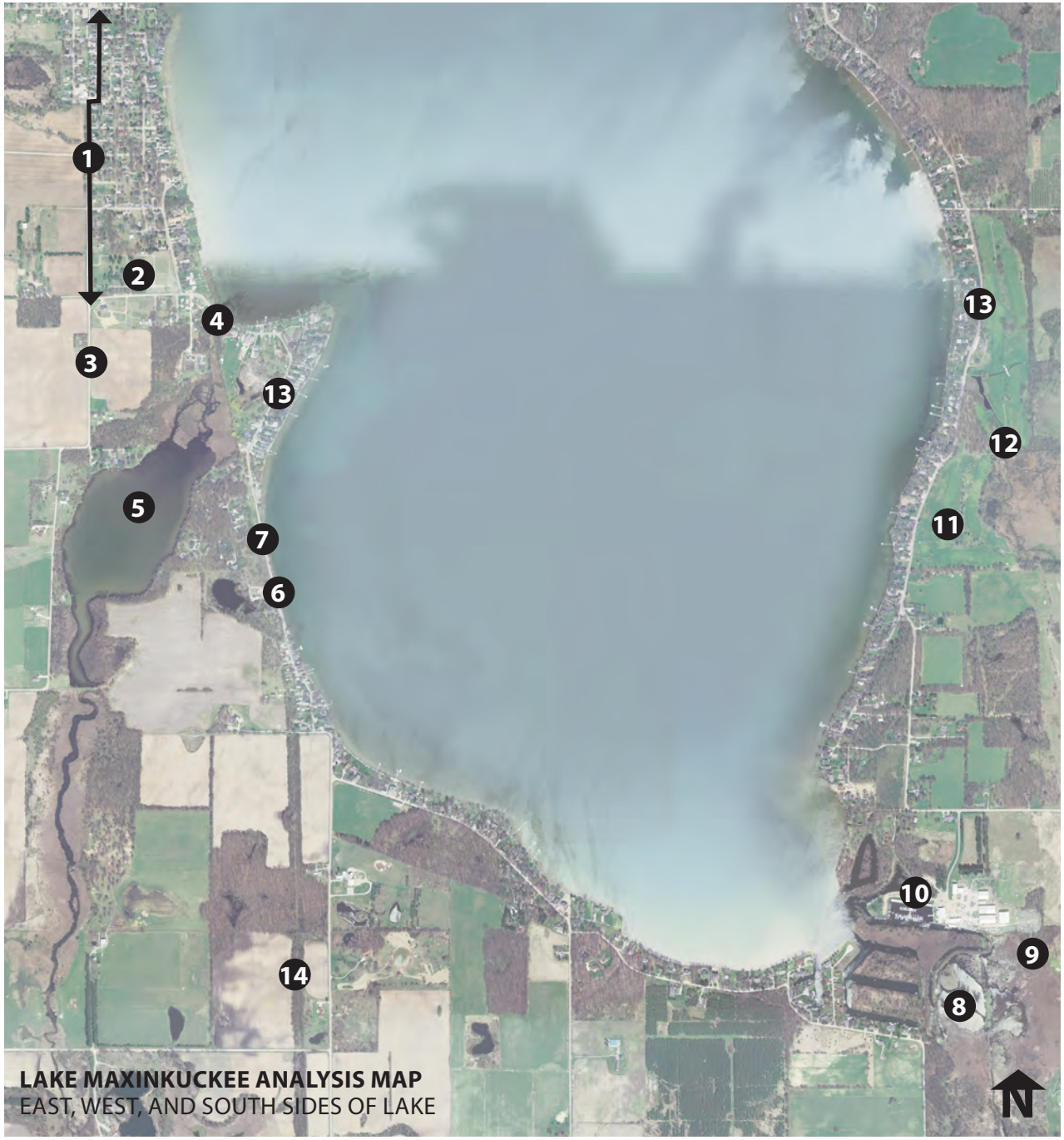
2. The school parking lot could potentially be another parking area from which to access the trails, particularly for bikers.

3. Green Space within the Sand Hill Farm Development could be incorporated as walking trails.

4. The challenge with having any sort of a path past the public boat launch is that it is already a very dangerous spot for cyclists and pedestrians. Incredibly high traffic area with trucks and trailers/boats.

MAP ANALYSIS

1. Trail routing to go on east side
2. Cemetery
3. Sharrow around south side of lake
4. Room to go on for trail- unknown spring source
5. Hawk Lake
6. DNR owned land for boat launch
7. This area is crowded with vehicles and trailers during summer
8. Lake Maxinkuckee Wetland/DNR
9. Mystic Hills Golf Club
10. Culver Marina
11. Maxinkuckee Country Club Golf course
12. Curtiss Ditch lowland area
13. Existing narrow road with adjacent residential improvements
14. Abandoned railroad corridor - no longer owned by the railroad



LAKE MAXINKUCKEE ANALYSIS MAP
EAST, WEST, AND SOUTH SIDES OF LAKE

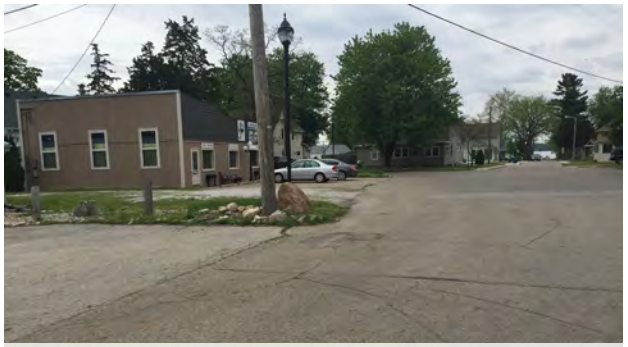
LAKE MAXINKUCKEE ANALYSIS MAP
DOWNTOWN CULVER

MAP ANALYSIS

15 Culver Academies Golf Course
16 Culver Academies Summer Camps
17 Old Railroad Line Owned By Culver Academies
18 Park N' Shop
19 Culver Park And Beach Lodge
20 Culver Community Schools Admin.
21 Culver Comm. Junior-Senior High School
22 Culver Elementary School
23 Culver Cove Resort Conference Center
24 Culver City Hall
25 Culver-Union Township Library

Downtown Culver, featuring ADA crosswalks, wider sidewalks, and standard benches and trash receptacles.

Neighborhood connections are an important part of encouraging bicycling in the community



Wide asphalt sections make pedestrian activity undefined and difficult to navigate

Washington Street provides an ideal location for the downtown connector portion of the trail

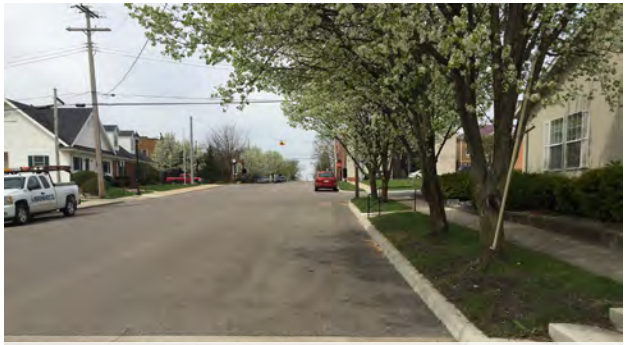
Tree lined streets provide a defined pedestrian zone, which aides in connecting people to the lake

Tight Right-of-Ways, with improvements like retaining walls and utilities, complicate trail siting

Wide pavement will allow for ample room to develop a trail through this area near Town Hall

Beautiful area on W 18th rd that could include a trail

Narrow right of way and utilities along East Shore Dr will make a roadside trail difficult



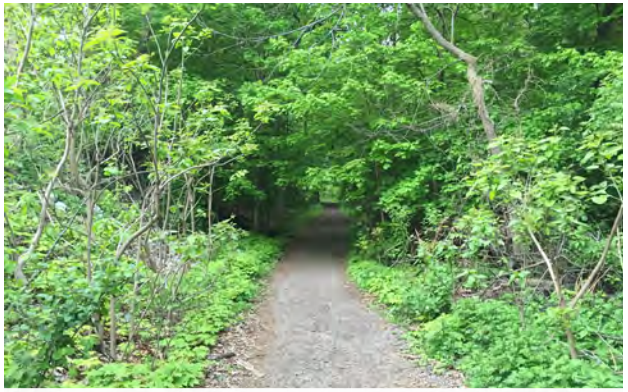
The existing street can be narrowed for traffic calming and to provide space for the trail

Undeveloped land near Queen Road could be a beautiful location for the multi-use trail

Academy Rd has street parking that could become a trail route if parking can be replaced on campus.

Wide tree lawns in the neighborhoods south of downtown will improve trail routing

Share the road signage on East Shore Drive



Old railroad corridor that would be a great location for a trail connecting the park to Culver Academies

The Light House serves as a distinct landmark mark for both Culver and Lake Maxinkuckee

Route that connects the town to the path along the Lake frontage in Culver Park

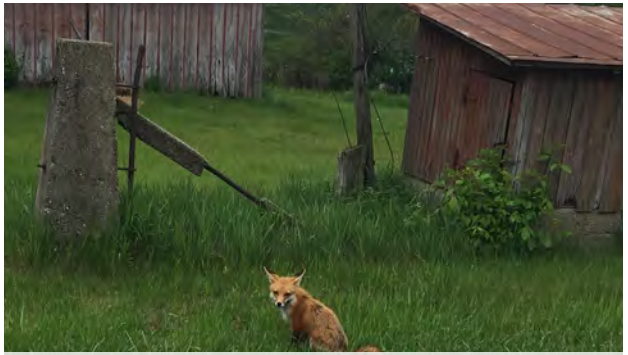
The pathway runs along the northern edge of Lake Maxinkuckee, in the southwestern portion of Culver Park. It serves as a key access point for the lake and would need to be improved to accommodate the trail.

This drainage obstruction cuts across the path ajacent to the lake

This trail connects to Culver Academies and runs along the northern part of Culver Park

Narrow, often crowded area between the Beach Lodge and beach is not condusive to a trail

The IDNR Wetland Area could become a beautiful attraction for the trail around Lake Maxinkuckee.



A variety of wildlife can be found in the native areas surrounding the lake

Several scenic areas such as Hawk Lake, provide unique views from different ecosystems

Marmont/Old Township Cemetery

Lilac Rd is a narrow gravel road that may require a widened right of way for a trail

Bridge over a ditch on 20 A Road that will need to be widened to include a trail

SWOT ANALYSIS

1. **Strengths:** Addresses the most important qualities, resources, or advantages to be leveraged moving forward. The resource of the Lake, the Culver Academy Campus, the high community engagement and culture are all important strengths to feature in the master plan.
2. **Weaknesses:** Looks at areas for improvement and existing issues impacting the plan recommendations. Culver's weaknesses include the dichotomy of priorities between permanent and seasonal residents, the existing car-centric environment, and the need for universal access upgrades throughout the community.
3. **Opportunities:** Addresses both existing community aspects as well as trends to take advantage of as the strategies are developed. With so many initiatives and events going on, Culver's opportunities abound. Contextual and Regional connections, coupled with the anchor institutions' support, all are important opportunities to explore.
4. **Threats (and Obstacles):** The aspects that may prevent the long term success of the master plan must be a priority to address within the recommended strategies. These include biking as a recreational vs daily activity, the seasonal use of the network, and perception of safety all may impact the overall success of this plan.

PHOTO SOURCE: HTTP://WWW.CULVER.LIB.IN.US/GALLERY_LAKE/OTHER/ALONG_LAKE_MAX_UNDATED_POSTCARD.JPG

STRENGTHS

Lake Maxinkuckee: The lake serves as a critical driver of activity for Culver, as a natural resource, aesthetic feature, and a catalyst for recreational opportunities.

Culver Academies Campus: The campus provides a beautiful setting of architecture and open spaces; internationally known.

Destination: The "lake culture" that Culver embraces, lends itself to an influx of people. A trail system can expand the lake culture by providing recreational opportunities and access to amenities.

Community Support: As evidenced by the Stellar Communities process, Culver has exception support by residents, businesses, and local groups.

WEAKNESSES

Car Centric Environment: Much available land area within the town is geared for use of cars, from streets to parking. This infrastructure is designed with a focus on cars, not people, and as such is not condusive to walking or biking. This includes wide street sections, parking that utilizes valuable lake frontage, and limited crosswalks.

Condition of Infrastructure: The existing pedestrian infrastructure, namely sidewalks, are not fully connected to the network. Many areas lack ADA ramps or have sidewalks that dead-end into streets. While recent and upcoming SRTS projects are improving sidewalks in town, a full walkthrough audit of the sidewalks should be conducted to better evaluate full condition of the infrastructure.

Permanent vs Seasonal Residents: Like many communities with a lake, Culver has seasonal residents who may offer a different perspective of the use of the bicycle/pedestrian system.

OPPORTUNITIES

Anchor Institutions: Six churches, four schools, and the Culver Union Township Library combined with the various restaurants and other merchants in Culver can provide much needed support in not only in the planning process, but ultimately, in the use of the bicycle and pedestrian system itself.

Contextual Connections: Better connecting key community amenities, such as the downtown and Culver Park, to the bicycle/pedestrian network strengthens both elements. These connections helps to showcase the community and take advantage of the resources available to make the network more sustainable.

Regional Connections: Marshall County's recommended bicycle route, the Nickle Plate Trail, and MACOG's Active Transportation Plan all will play a role in Culver's bicycle and pedestrian initiatives. Additionally, connecting to the various communities in the area will strengthen their economies, while increasing access to Culver.

THREATS AND OBSTACLES

Perception of Biking: How the community views bicycling - for instance, recreation only vs primary means of transportation - may impact the success of the bicycle and pedestrian network.

Seasonal Use of Network: Seasonal use may skew investment toward different pieces of infrastructure, but ultimately, the design must meet both anticipated fluxes in use as well as reinforcing the permanent residents' priority to be more a bicycle friendly community overall. Careful consideration of permanent residents must be made throughout the process.

Safety: Without addressing the actual and perceived safety of the bicycle and pedestrian network, it will be hard to attact users or allocate resources to a marginally successful system. Culver is also unique in its high volume of golf cart use in town. Design and policy much account for this.

KEY CONSIDERATIONS

1. **Leverage resources:** Existing amenities, such as Lake Maxinkuckee, the Culver Academies campus, the various golf courses, and natural areas can be utilized to provide a unique experience for the system users.
2. **Consider the role of the community Anchor Institutions in implementing the plan:** From the schools to the library to the religious institutions, how does this plan better support their mission? Finding the overlaps between these disparate groups and the relationship to the end goal of the bicycle and pedestrian network will create value for everyone.

ANALYSIS SUMMARY

Social/Cultural and Environmental community aspects were assessed throughout the planning process. After collecting a basic inventory for each facet, the categories were analyzed to determine their impact to the community's bicycle and pedestrian systems. While some of the strengths and weaknesses have long been understood - such as the important role that the lake plays for the town - outlining the potential opportunities and obstacles will help leverage the positive and reduce the negative components to these critical elements.

Using this framework, the following pages establish clear expectations and a vision for the bicycle and pedestrian system. Specific strategies and tactics utilize that direction to leverage the opportunities and solve the problems identified within the existing conditions section.

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CHAPTER 3
VISION AND GOALS

"THE MORE SUCCESSFULLY A CITY MINGLES EVERYDAY DIVERSITY OF USES AND USERS IN ITS EVERYDAY STREETS, THE MORE SUCCESSFULLY, CASUALLY (AND ECONOMICALLY) ITS PEOPLE THEREBY ENLIVEN AND SUPPORT WELL-LOCATED PARKS THAT CAN THUS GIVE BACK GRACE AND DELIGHT TO THEIR NEIGHBORHOODS INSTEAD OF VACUITY."

JANE JACOBS
THE DEATH AND LIFE OF GREAT AMERICAN CITIES

ESTABLISHING A VISION

The vision statement provides guidance for the bicycle and pedestrian master plan and for any revisions to the plan in the future. This vision statement should guide the implementation efforts of City staff going forward.

VISION STATEMENT

The Town of Culver will create a universally accessible bicycle and pedestrian network that fosters community health, improved amenities, encourages economic growth, and enhances community pride.

To implement this vision, the proposed system will build upon and improve the existing network of trails, sidewalks, and bike routes. At the same time it will be important to develop partnerships, encourage baseline engineering and planning standards and policies, promote bicycle and pedestrian education within the community, outline enforcement guidelines, and determine the key performance indicators. By developing these components, the vision, goals, and priorities outlined in this section will lead to the desired benefits.

DEFINING THE AMBITION AND INTENT

The purpose for the Town of Culver's Bicycle and Pedestrian network includes a complete system of facilities to connect people to local and regional amenities, better supporting the existing bicycle and pedestrian culture in the community, while encouraging opportunities for growth.

The system will provide many benefits including:

- ***Increased community health*** *through integration of the facets of health including physical, social, mental, and environmental.*
- ***Improved natural habitats*** *through awareness and preservation of naturalized areas.*
- ***Increased community amenities*** *that support a variety of uses such as commuting, recreation, and exercise.*
- ***Increased economic growth and development*** *both through connecting commercial areas locally and regionally as well as through potentially increased property values.*
- ***Enhanced community attachment*** *by showcasing the unique qualities and placemaking that cultivate a stronger regional identity.*

The goals and objectives that follow are driven by the vision and are aimed at providing the outlined benefits through the development of a safe, attractive, accessible, and convenient bicycle and pedestrian system for all users. They reflect the current direction of planning efforts of Culver and will help the Town to determine priorities for continuing to develop the bike and pedestrian system.

The goals are the long-range ambition of the master plan, targeted at developing an effective system for walking and bicycling. They determine the desired direction of alternative transportation planning and guide the development of the projects. From there, the objectives clarify the means to accomplish the goals and identify metrics for measuring the success of the plan.

GOAL 1: CREATE COMMUNITY CONNECTIONS

- ***Link Key Amenities:*** *Creating these critical connections provides value to the anchor institutions and resources in the community and underscores the benefit to using the proposed system for purposes other than recreation.*
- ***Improve System Coverage:*** *By increasing access to the bicycle and pedestrian system, not only will use of the system increase, but this will further establish links to community amenities and institutions.*
- ***Provide Safer Walking and Biking Environment:*** *Providing new infrastructure is only part of the solution; the improvements must be made in such a way that encourages use. Experiencing the community in this way will foster deeper community connections and safer access to community amenities such as Culver Park, Culver Academies, downtown, and Culver Schools.*
    - *Many Shops and restaurants in town do not have safe pedestrian access. An example of this is the businesses along SR 10.*

GOAL 2: ATTRACT PEOPLE TO DOWNTOWN

- ***Build on Connections:*** *Direct physical connection to the downtown via the trail provides a means for people to come into downtown Culver. In addition, supporting the network through programming and additional amenities (such as bike parking/storage), encourages use by people outside of Culver.*
- ***Creating a Trailhead/Node in the downtown:*** *A trailhead/node located in or near downtown will draw more people downtown, and create opportunity for trail users to dine or shop while using the trail.*
- ***Leverage Available Regional Resources:*** *Providing links to adjacent networks, such as the Nickel Plate Trail and the proposed MACOG Active Transportation system, gives trail users additional opportunities. Promoting the trail system with communities and organizations in the surrounding areas drives further system use. Culver, with its regional draw as a destination, will benefit by regional trail connections by giving regional users access to Culver's restaurants, shops, and lodging.*

GOAL 3: DEVELOP LOOP AROUND LAKE

- ***Connect Key Population Areas:*** *Aside from the population density within the town boundary, the majority of the residential areas are immediately adjacent to Lake Maxinkuckee.*
- ***Connect Key Resources:*** *The IDNR Conservation Area, three regional golf courses, as well as the schools each influence the overall lake loop route because of their concentration of potential users and/or the additional amenities they provide. These resources increase diversity of the activities offered by the system.*
- ***Utilize Available Infrastructure:*** *Creating shared roadway sections reduces cost by using existing, but less trafficked routes while also facilitating better coverage and connections.*
- ***Separated Trail:*** *The ultimate goal is to create a separated 10' wide multi-use trail that circles the lake. Separating the trail from vehicular traffic will improve safety for its users.*

GOAL 4: SUPPORT MULTIPLE USES

- ***Connect Anchor Institutions and Community Resources:*** *The best way to encourage system uses other than recreation is to connect the key amenities in Culver. This includes places such as grocery stores, churches, the library, and schools. Making those connections easy to take advantage of (primarily through efficiency and convenience) will broaden the way users take advantage of the system.*
- ***Encourage Bicycling and Walking Through Education and Outreach:*** *Another way to support multiple uses for the system is to promote it through events/programming as well as education outreach. Whether through introducing bicycle safety and alternative uses in school presentations or through hosting a booth at a local festival, going to the people will aid in this process.*

GOAL 5: TIE INTO REGIONAL TRAIL SYSTEM

- ***Provide North and South System Tie-Ins:*** *Connecting to Marshall County's network as well as the Nickle Plate Trail will more effectively bring in visitors from outside Culver. It also makes it easier for people in the community to connect with cities and towns in the region.*
- ***Highlight Upcoming Regional Recreational and Active Transportation Opportunities:*** *The MACOG Active Transportation Plan will highlight additional connection opportunities. Working with MACOG on implementation of their plan will strengthen both master plans and ensure the most efficient and effective use of resources moving forward.*

IDENTIFIED PRIORITIES

Using the vision and community goals as a jumping off point, these six public priorities represent the most important initiatives and creates the framework for the recommended improvements. These projects are listed in order of importance and build on existing initiatives, such as the Main Street Transportation Enhancements and the Safe Routes to School projects. Each project builds off the previous one, seeking first to provide new amenities to the highest density areas and implement low cost projects, then create the regional links.

1. **Academies To Park To Downtown Trail Connection.**
2. **Improve Pedestrian Infrastructure, Such As Sidewalks, Crosswalks, And Curb Ramps.**
3. **Pavement Markings And Signage For Safer Shared Roadways Such As East Shore Dr. And West Shore Dr.**
4. **Multi-Use Trail On The East Side Of The Lake.**
5. **Multi-Use Trail From Schools To West Shore Dr.**
6. **Multi-Use Trail On The South End Of The Lake.**
7. **Multi-Use Trail On The West Side Of The Lake.**

CHAPTER 4
POLICY AND PROGRAMMING RECOMMENDATIONS

"CITIES ARE DISCOVERING THAT BICYCLING INVESTMENTS ARE A COST-EFFECTIVE WAY TO BUILD INFRASTRUCTURE AND CREATE JOBS."

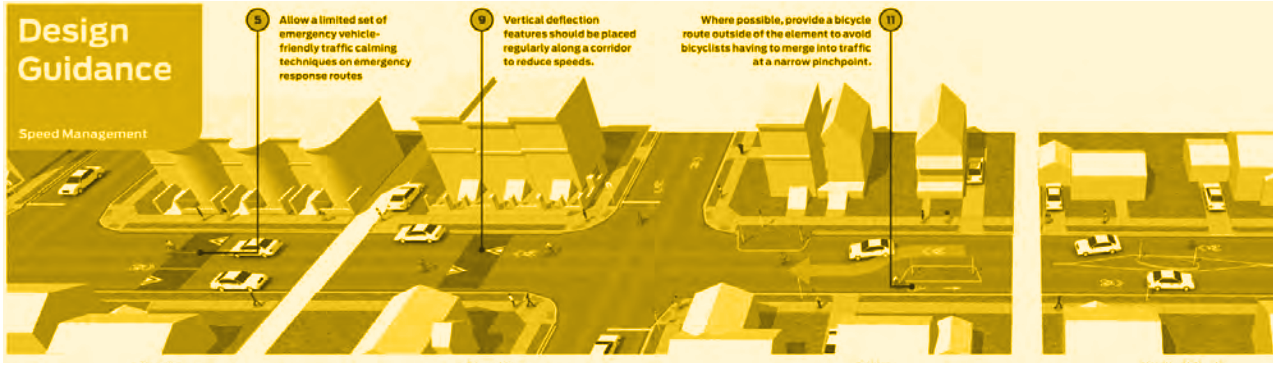
DARREN FLUSCHE, POLICY DIRECTOR
LEAGUE OF AMERICAN BICYCLISTS

INTRODUCTION

In order to ensure long term efficacy of this Master Plan, policies regarding the design and construction of bicycle and pedestrian infrastructure as well as public education, promotion/encouragement, and enforcement must be implemented. These ensure that minimum standards for all future projects comply with the overall vision of the community. They also delineate clear direction for review boards and committees as they approve new projects within the community. Additionally, the recommended improvements are based on national best practices, and should involve education initiatives that promote safe practices for cyclists, pedestrians, and drivers alike.

NATIONAL ASSOCIATION OF CITY TRANSPORTATION OFFICIALS

As a non-profit association, NACTO facilitates urban street, bikeway, and transit street design guidelines and is "committed to raising the state of practice for street design and transportation". Their design guides serve to supplement the American Association of State Highway and Transportation Officials (AASHTO) guidelines and are gaining increasing prevalence with smaller communities throughout the United States.



PLANNING AND ENGINEERING POLICY RECOMMENDATIONS

By utilizing engineering policies and standards as the baseline measures for all future projects, the Town of Culver ensures that the intention and vision of this Master Plan will be incorporated. The policies contained in this section specifically address the design, construction, and maintenance of bicycle and pedestrian infrastructure. These policies should be adopted by all current and future town government agencies and departments, especially the Building, Street, and Park/Recreation Departments.

System and Infrastructure Design

- *Update the current version of the Culver, Indiana Zoning Ordinances to include provisions for bicycle and pedestrian infrastructure.*
- *Follow the Complete Streets process to facilitate biking and walking accommodations in Culver.*
- *Use nationally-recognized design guidelines, including AASHTO and NACTO, when designing on-street bikeways.*
- *Generate "Typical Cross Sections" Standard Construction Details for streets to include on-street bikeways.*
- *Generate typical Construction Specifications that clearly specify bike lane width.*
- *Design all trails/multi-purpose paths with a minimum design speed of 15miles per hour.*
- *Design all trails/multi-purpose paths with a minimum width of 10 feet.*
- *Design all bike lanes and trails/multi-purpose paths with necessary regulatory and warning signage.*
- *Design all trails/multi-purpose paths with a maximum cross-slope of 2 percent and a maximum grade of 5 percent, unless existing conditions prohibits.*
- *Design trails/multipurpose paths, bike lanes, and sidewalk crossings that are safe and easy to understand.*
  - *Shorten crossings distances (more appropriate for town/urban settings)*
  - *Utilize intersection pavement markings that indicate the intended path of bicyclists across driveways and through intersections.*
  - *Design highly-visible crosswalks that are free of obstructions.*

- *Replace curb ramps as part of reconstruction and resurfacing projects in accordance to ADA transition plan.*
- *Design street projects that slow motor vehicle speeds and minimize bicyclist delay*
  - *Utilize vertical deflection speed control measures, such as raised crosswalks, when applicable.*
  - *Utilize horizontal deflection speed control measure, such as curb extensions, when applicable. These implementations can also serve as stormwater management features. When using horizontal speed management treatments, a minimum clear width of 12 feet for travel shall be maintained.*
- *Place utility access points out of the path of bicyclists.*
- *Design bikeways and paths that function equally well along existing rural cross-sections and future urban cross-sections.*
- *Increase bicycle and pedestrian access and circulation by ensuring connectivity between neighborhoods.*
- *Continue to develop and maintain a Capital Improvement Plan for bikeways and paths.*
- *Develop a Town Safe Routes to School plan to improve the safety of children walking and biking to school.*
- *Establish a plan and program for acquiring right-of-way or easements for future paths along roadways*
- *Establish a congruent Town Wayfinding System for bicyclists and pedestrians that distinguish the routing around the town from regional trail projects.*
- *Work with Marshall County to support their regional bicycle and pedestrian efforts, including signage and design standards.*

Bicycle Parking

- *Include bicycle parking requirements in the Supplementary Provisions, Regulations, and Requirements (Chapter 5) in the Culver, Indiana Zoning and Development Ordinance including:*
  - *Minimum Number of Bicycle Spaces.*
  - *Proximity to primary structure.*
  - *Bike rack and storage standards.*
- *Work with businesses and land owners to retrofit bicycle parking into existing development.*
- *Anticipate the future need for long-term bicycle parking as the system is implemented.*

Infrastructure Maintenance and General Maintenance

- *Adequately maintain bicycle and pedestrian infrastructure on a regular basis.*
- *Sweep all on-street bikeways and paved paths regularly.*
- *Provide prompt maintenance of potholes and other pavement damage.*
- *Repaint bikeway and crosswalk markings before they fade.*
- *Clear snow from key on-street bikeways and paths in a timely manner.*
- *Vegetation should be trimmed to maintain visibility and attractiveness.*

EDUCATION AND ENCOURAGEMENT POLICY RECOMMENDATIONS

Public awareness of the vision and proposed implementations will continue to foster support, use, and growth of the system. To supplement the baseline guidelines for street and bicycle pedestrian infrastructure construction, public awareness initiatives need to be encouraged by government agencies, but also partially driven by external partnerships.

- *Create and encourage partnerships with local and regional agencies, organizations, and anchor institutions on bicycle education events such as a bike safety workshop and other activities.*
- *Include at least one piece of bicycle and pedestrian education annually in Town communications to residents (Town newsletter, utility bills, tax bills, etc.).*
- *Provide road safety and education materials on the official Town of Culver website – www.townofculver.com - for the Residents, Businesses, and Government Department pages.*
- *Investigate offering a bicycle and pedestrian education course as an alternative for bicyclists, pedestrians, and motorists who are first-time minor offenders of bicycle and pedestrian related rules of the road.*
- *Provide educational information on how bicyclists, pedestrians, and motorists should use future street projects such as intersections*

and roundabouts.

- *Sponsor "Bike to Work Week" and "Bike and Walk to School Day".*
- *Sponsor and/or support local family-friendly events that promote bicycling or walking.*
- *Develop and publicize a bicycle user map.*

ENFORCEMENT POLICY RECOMMENDATIONS

Focusing on regulating the use of the Bicycle and Pedestrian Network, while important, only partially addresses safety of the users. Vehicular regulation should be a priority, which encourages use of the system and ensures the safety of the people using the network. Partnering with Law Enforcement agencies on education initiatives ensures the full community support of the vision and implementation of the network, aides in the promotion of the network, and ensures all groups are aware of the correct procedures and rules of the entire transportation system.

- *Continue to enforce posted speed limits, particularly in school speed zones.*
- *Utilize automated speed-tracking equipment, when available, to provide feedback to motorists when they are exceeding the speed limit.*
- *Develop enforceable rules and regulations regarding golf carts on public roads and multi-use trails.*
- *Expand law enforcement training as part of police academy curriculum and ongoing officer education.*
- *Develop rules and regulations for shared-use and other paths on which bicycles are allowed.*
  - *Include regulation of bicycle and pedestrian traffic as well as strict regulation of vehicular traffic as it interacts with bicycle and pedestrian infrastructure.*
  - *Include language regarding prohibiting riding bicycles on sidewalks within downtown area. Signage should clearly indicate this rule.*
  - *Include language that indicates clear rules for vehicles passing bicyclists on shared-use routes.*

EVALUATION POLICY RECOMMENDATIONS

Key performance indicators help to determine progress and identify areas for improvement. These indicators can also help show areas for further investment or when to allocate resources elsewhere. In addition, developing clear expectations of the quality of the system, such as seeking awards or special designations, promotes the wise use of resources and provides additional community development marketing.

- *Utilize coverage and connectivity metrics, which are qualitative and quantitative, versus miles of bicycle infrastructure added, which only serves to quantify the implementation. This will better indicate the overall success of the network and maintains people as the focus.*
- *Continue to conduct annual bicycle and walking counts throughout the City to measure the usage of facilities and growth in these modes of travel.*
- *Apply for and receive a bronze level award for "Bicycle Friendly Community" from the League of American Bicyclists by 2019.*
- *Apply for and receive a bronze level award for "Walk Friendly Community" from the Pedestrian and Bicycle Information Center sponsored by the U.S. Department of Transportation by 2019.*

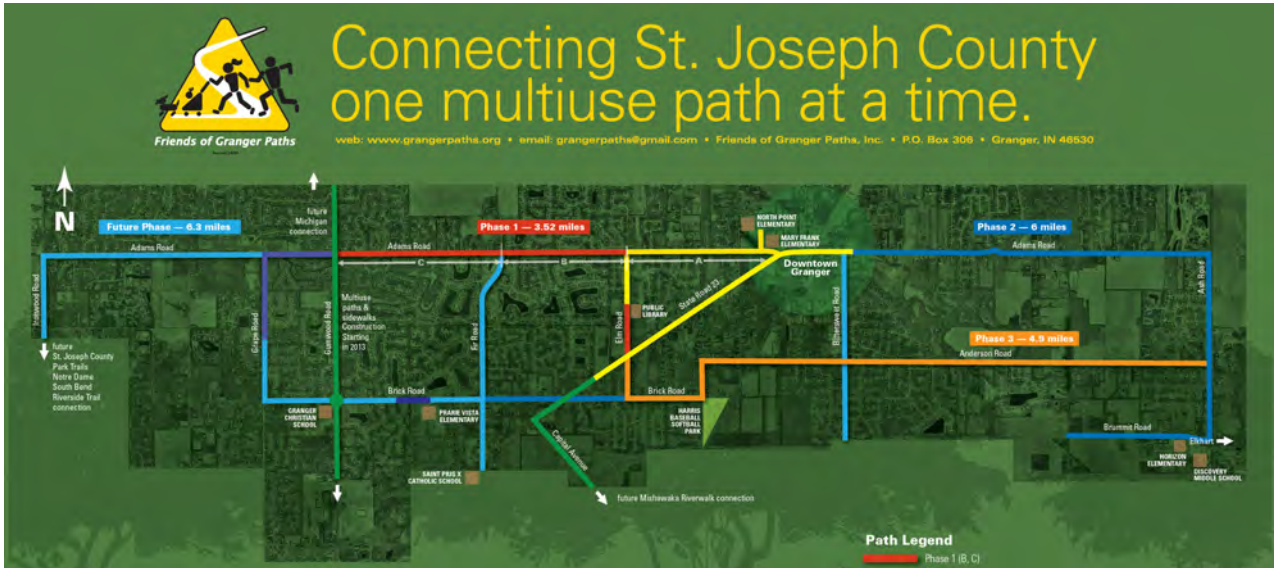
STARTING A 501.C.3

Aside from the passion and leadership necessary to move these types of initiatives forward, nonprofits help with raising matching funds in ways that most municipalities cannot.

IRS Exemption Requirements: To be tax-exempt under section 501(c)(3) of the Internal Revenue Code, an organization must be organized and operated exclusively for exempt purposes set forth, and none of its earnings may inure to any private shareholder or individual. The organization must not be organized or operated for the benefit of private interests, and no part of an organization's net earnings may inure to the benefit of any private shareholder or individual.

Indiana Fundraising Requirements: Materials required in order to comply with the Professional Fundraiser Consultants and Professional Solicitor Registration Act, Indiana Code § 23-7-8-1 et seq. which can be found on the Attorney Generals website (http://www.in.gov/attorneygeneral/2379.htm).

For more information: Refer to the Chapter 6: Implementation Strategies examples of local and state agengies geared toward funding and promoting bicycle and pedestrian infrastructure.



CASE STUDY: FRIENDS OF GRANGER PATHS

http://grangerpaths.org/

This nonprofit volunteer group of residents helped define the vision for the trail system in the suburban community of Granger, northeast of South Bend, IN. By establishing several community partnerships, continued advocacy, and fundraising, the Friends of Granger Paths has been instrumental in pushing a multi-phased pedestrian trail forward.

A master plan was created to guide the development of the multi-use trail system. Backed by the goals and direction outlined in the plan, Friends of Granger Paths set out to make this a reality. Through advocacy and networking, they established partnerships with local businesses, gathered support from local residents, and began fundraising. Businesses and residents became sponsors, and fundraising events were created. The biggest event is their annual 5K run/walk, which continues to grown in attendance and funds raised. Friends of Granger paths was able to raise enough money to provide the 20% local match for the federal grant that paid for the construction of phase 1, which was completed in 2014. Phase 2 is currently under design and will begin construction in 2017.

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CHAPTER 5
PROPOSED SYSTEM

"Cities with high bicycling rates tend to have lower crash rates for all road users. When cities invest in bike lanes, everyone wins because there is a focus on making the roads safe for all who use the cities' streets. And the more cyclists we have, the safer it becomes because of the decrease in [vehicular] traffic."

SELLING BIKING STUDY
PEOPLE FOR BIKES

INTRODUCTION

From the onset of this Trail Master Plan project, the plan has maintained a deep focus on people. Two key components were addressed: the Pedestrian Network and the Bicycle Network. These two systems were examined at various scales to ensure local and regional connectivity. At the macro level, the proposed system addresses route recommendations, including key regional trail and amenity connections. These recommendations are shown at phased intervals, based on the priorities of the community and importance to the network. At the micro level, the system outlines specific trail siting through the downtown area and typical sections for the area. The macro level addresses more bicycle network connectivity, while the micro level looks at pedestrian network connectivity to the bicycle network from the Town.

Any recommended projects on the subsequent plans will utilize the planning and engineering policies outlined in the previous section to influence design decisions and budgeting. Recommended projects delineated include proposed mult-use paths, proposed shared roadways (with signage and markings), proposed connector sidewalks, and proposed trailheads/nodes.

PEDESTRIAN NETWORK

While sidewalks serve as the primary infrastructure for the Pedestrian Network, other considerations to improve this aspect of the system include introducing appropriately scaled elements.

Sidewalks: Improving the universal access of the town through the use of ADA ramps and appropriately graded sidewalks create more livable environments.

Lighting: Lower light fixtures increases safety in areas that people use, it aids in geographic orientation and wayfinding, it draws attention to important details, and it can serve as a traffic calming device (because it signals to drivers they have entered a different zone than adjacent highways). Secondary functions for lightpoles include banners, hanging planters, and additional electrical capacity.

Landscaping: Street trees improve the curb appeal of the community, improve ambient air quality, decrease the urban heat island effect, and contribute to the ecological management of stormwater. They also help decrease the scale of urban corridors while increasing pedestrian comfort. They can also play a role in managing speeds through their impact on the legibility of vehicular and pedestrian interactions.

BICYCLE NETWORK

The bicycle network portion of the master plan focuses on any trail/multi-use path and shared roadway/bike lane route. While only key routes were selected for this iteration of the master plan, it is recommended to pursue additional connectivity, both programmatically and with physical infrastructure.

Bike lanes: In addition to providing better connectivity for bicyclists, these designated lanes help increase the safety and access for all users of streets by narrowing vehicle travel lanes in existing situations.

Trails: Multi-purpose paths provide the highest perception of safety for bicyclists through their full separation from vehicular traffic. They support multiple recreation opportunities (walking, biking, skating) and is typically asphalt or concrete. While having a closed trail loop is important, this portion of the system is a complement to the roadway bike lane network; not a substitute for providing safe access on streets.

Crossing (streets or driveways): As the bicycle/pedestrian infrastructure intersects with vehicular paths, pavement markings and/or warning indicators (like rectangular rapid flash beacons - RRFBs), may be necessary.

Signage

Following the NACTO Urban Bikeway Design Guide recommendations for all signage is recommended. Following MUTCD standards (Section 98.01 - Application and Placement of Signs and 98.20 - Bicycle Guide Signs) should also be strictly observed. The following are types of signs to employ within the network:

- Decision signs should be placed in advance of all turns or decision points along the bicycle route as well as along the route to indicate nearby destinations. These inform those using the network of upcoming routes, distances, and key destinations. These aspects can promote a greater understanding of the unique local qualities of Culver.
- Wayfinding and confirmation signage will also contribute to better use of the regional network that this system trail connects to, including the Nickle Plate Trail and Marshall County Bike Routes. These signs make motorists aware of bicycle routes, while also alerting bicyclists to the route they are using (information should be tied to wayfinding maps).
- Turn signage indicates where bikeways continue from one street to another. This signage can be complemented by appropriate pavement marking.

Pavement Markings

Under many conditions, these elements may be more visible than signage to motorists and bicyclists.

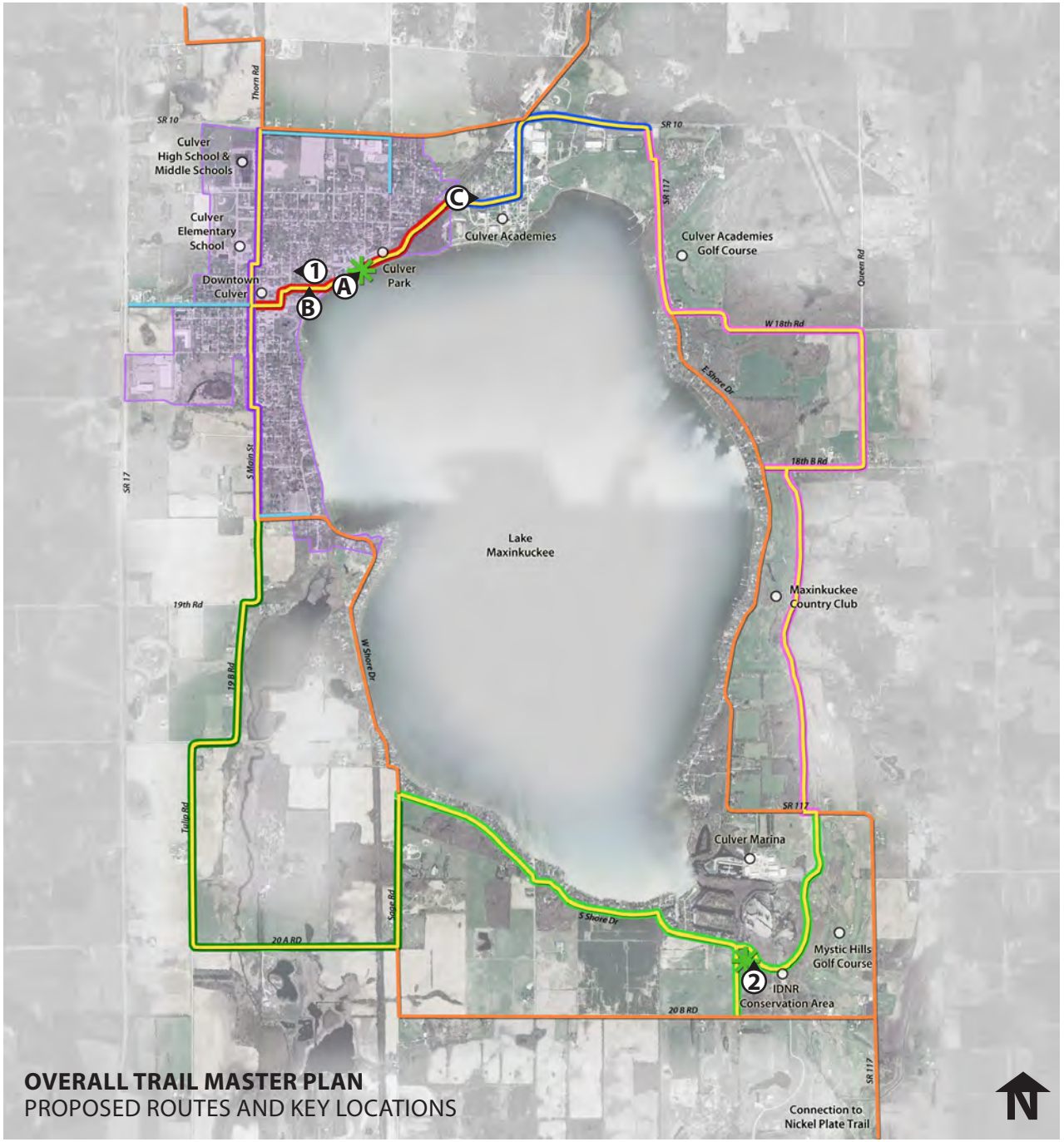
- Shared Lane Markings help indicate to motorist the potential presence of bicyclists and can help alert bicyclists to the route they are using.
- Cross Walk, Intersection Crossing, and Driveway Crossing pavement markings help delinate anticipated routes for bicyclists and pedestrians and should be used at all unsignalized street crossing.

Warning Indicators

The addition of user-actuated warning signs, such as RRFBs increase the safety effectiveness of other treatments, such as advance yield markings. These may be suitable for areas with high pedestrian activity such as near the schools or Culver Park.

"IF YOU PLAN CITIES FOR CARS AND TRAFFIC, YOU GET CARS AND TRAFFIC. IF YOU PLAN FOR PEOPLE AND PLACES, YOU GET PEOPLE AND PLACES."

FRED KENT
PROJECT FOR PUBLIC SPACES



OVERALL TRAIL MASTER PLAN
PROPOSED ROUTES AND KEY LOCATIONS

OVERALL TRAIL MASTER PLAN

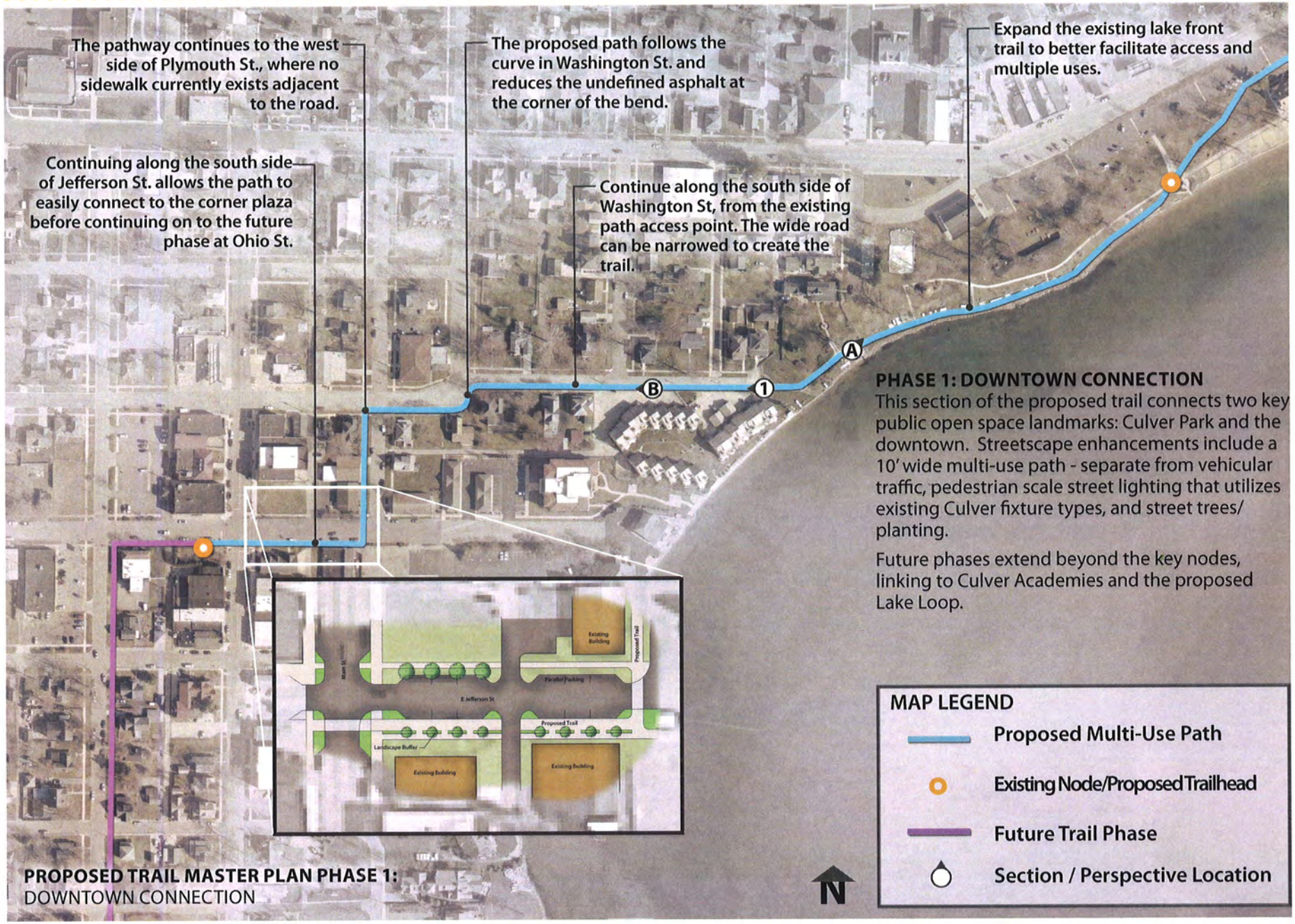
The proposed system shows a fully separated pathway loop for bicycle and pedestrians as well as several sections of shared roadways. These provide more efficient routes for daily bicycle commuters as well as additional options for recreational users. Proposed connector sidewalks tie into existing projects and facilitate more universally accessible routes in key areas. Trail phasing is based on public input, critical use areas, connecting local amenities, construction cost, regional connections and other factors. The downtown Culver and Culver Academies portions would be developed first, while regional links around the lake utilize existing lower-use county roads until separate facilities can be developed.

MAP LEGEND

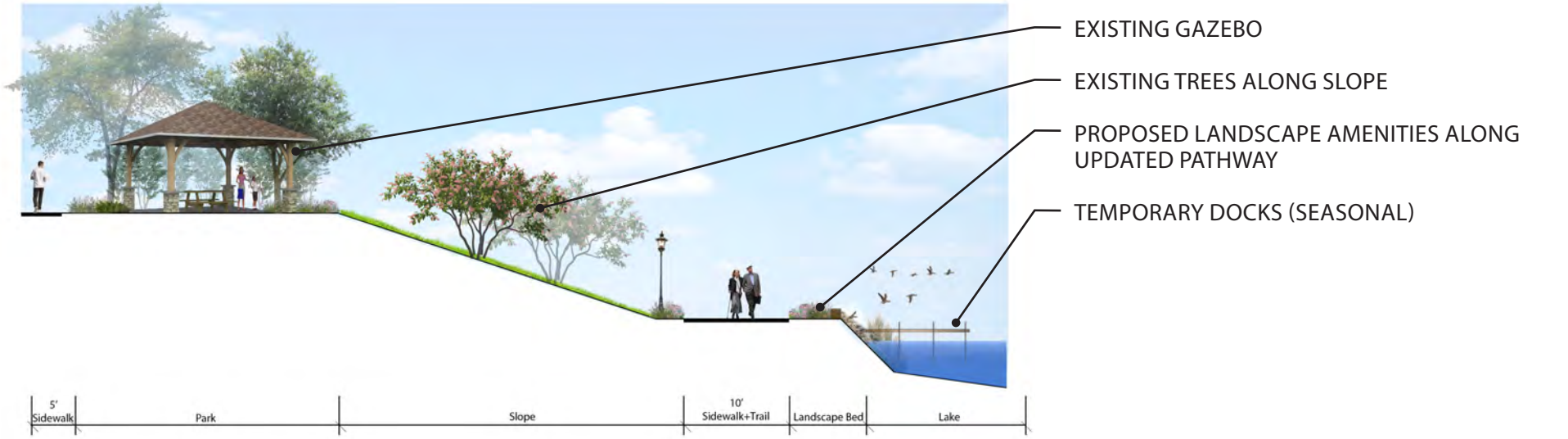
- Proposed Multi-Use Path
- Proposed Shared Roadway with Signage and Markings
- Proposed Connector Sidewalk
- Town Limits
- Proposed Trailhead or Node
- Section / Perspective Location

MULTIUSE PATH PHASING LEGEND

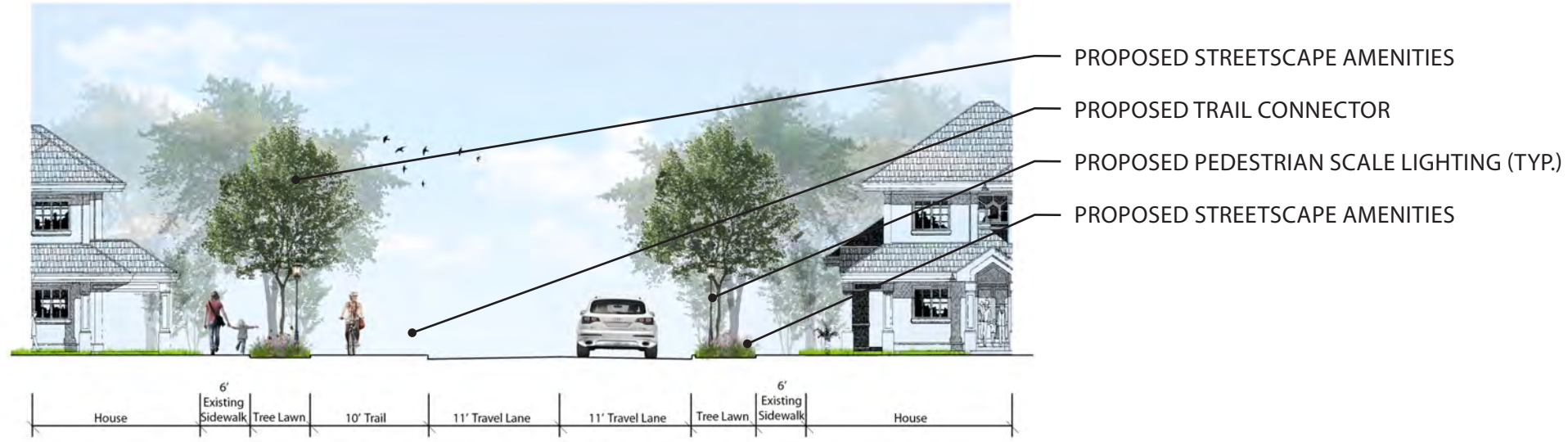
- 1 - Academies to Park to Downtown
- 2 - Downtown to SR 10 Ohio St & Main St South
- 3 - Culver Academies
- 4 - East Side Trail
- 5 - South Shore Trail
- 6 - West Side Trail



PROPOSED TRAIL MASTER PLAN PHASE 1:
DOWNTOWN CONNECTION

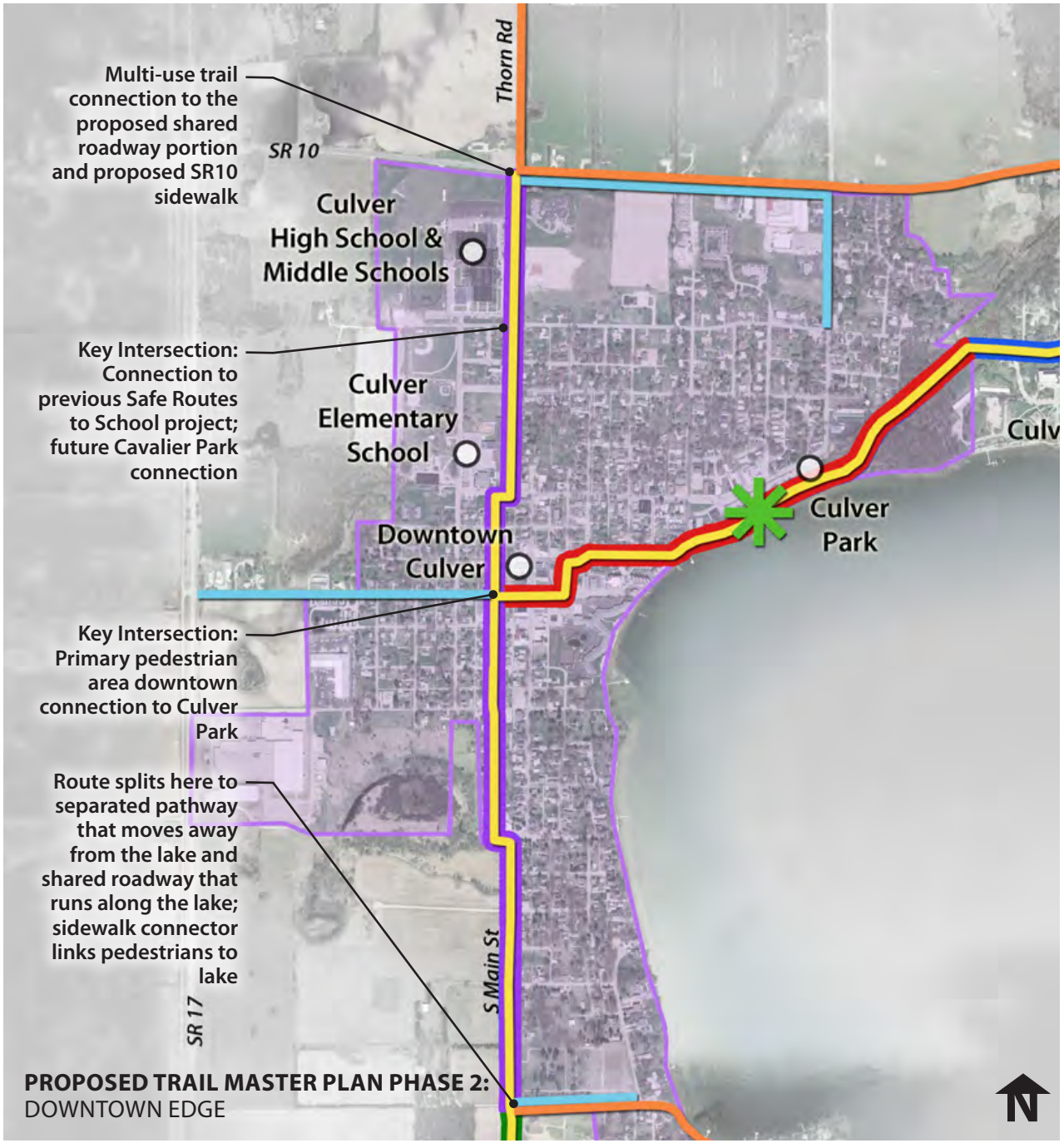


SECTION A. TRAIL ALONG LAKE MAXINKUCKEE
PHASE 1 - PROPOSED TRAIL SECTION



SECTION B. DOWNTOWN CONNECTION: E. WASHINGTON ST.
PHASE 1 - PROPOSED TRAIL SECTION

PROPOSED TRAIL E. WASHINGTON ST. PERSPECTIVE 1
PHASE 1 - PARK TO DOWNTOWN CONNECTION



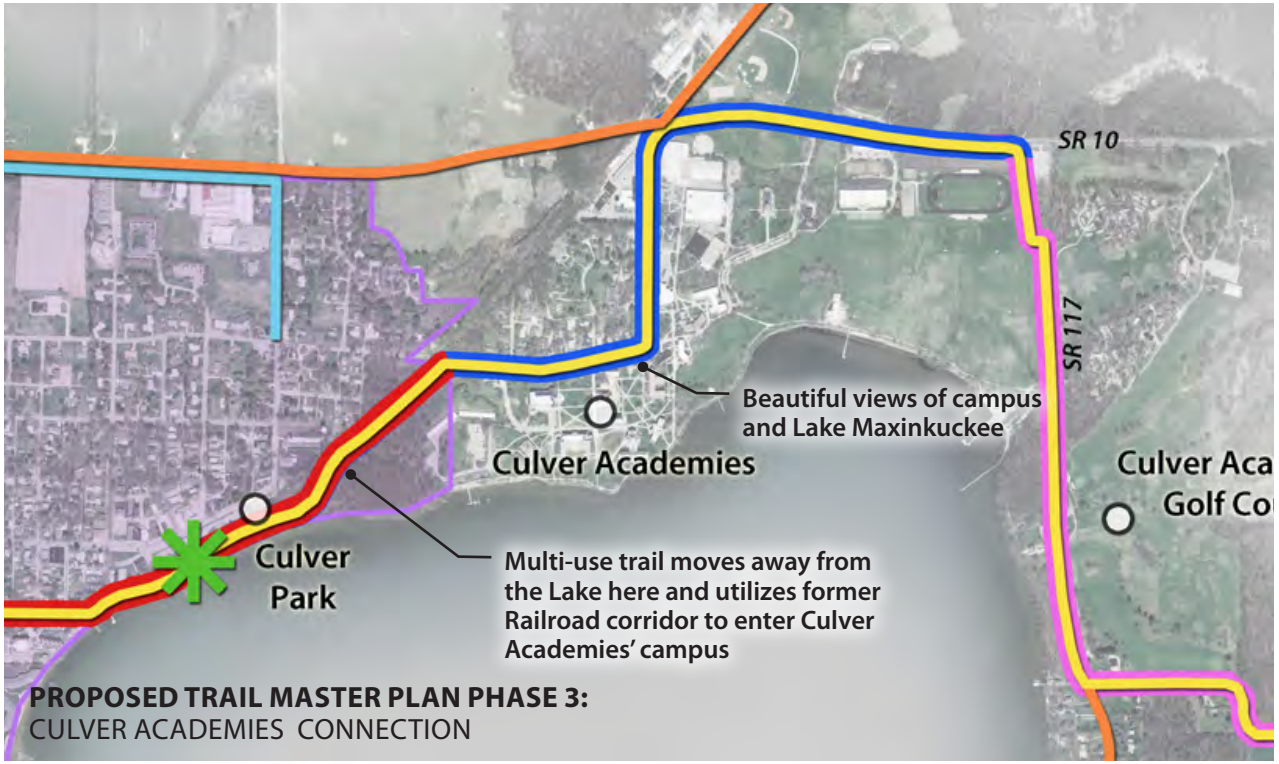
PROPOSED TRAIL MASTER PLAN PHASE 2:
DOWNTOWN EDGE

PHASE 2: DOWNTOWN TO SR10 / OHIO ST TO MAIN ST SOUTH

This portion of the Bicycle and Pedestrian system connects the north and south portion of the town, linking to key anchors in the community schools and the Culver Union Township Library. It is an important section of the system since it is located within town limits. It will provide a safe route for pedestrian travel and recreation connecting neighborhoods to the downtown and major amenities. This phase of the trail development connects the downtown to existing shared roadway routes to the north and south, and continues the proposed lake loop trail south along the west side of the lake.

MAP LEGEND

- Proposed Multi-Use Path
- Proposed Shared Roadway with Signage and Markings
- Proposed Connector Sidewalk
- Town Limits
- Proposed Trailhead or Node
- Section / Perspective Location

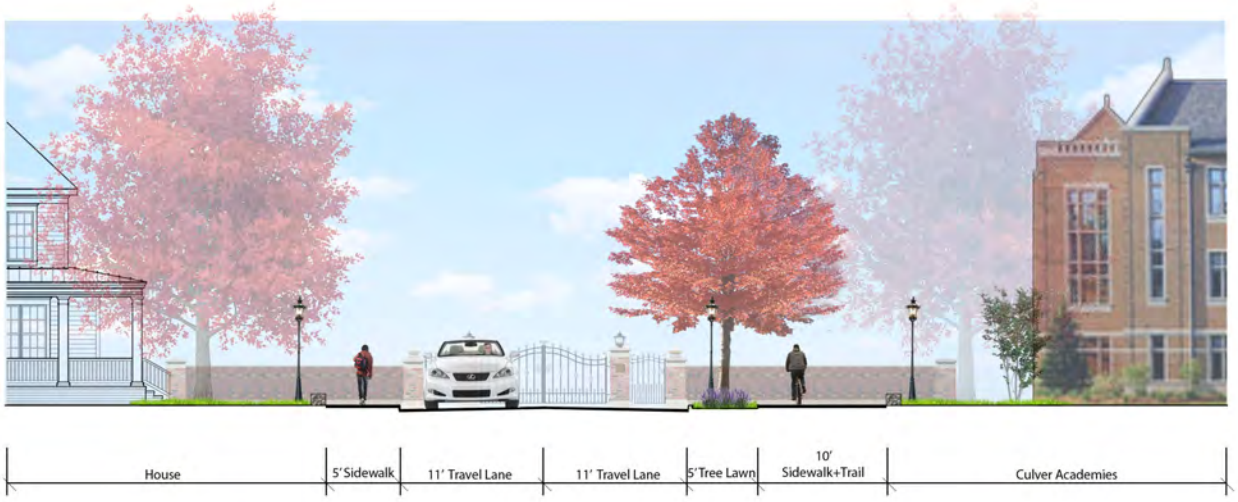


PROPOSED TRAIL MASTER PLAN PHASE 3:
CULVER ACADEMIES CONNECTION

PHASE 3: CULVER ACADEMIES CONNECTION

This route connects an important anchor institution directly to the multi-use path. The siting of the pathway through Culver Academies' campus provides a unique perspective of the community (with the scale and architectural diversity of the campus). As the path turns north, it connects to a proposed Shared Roadway and to existing Marshall County routes. The far West portion of this section connects at Culver Park, while the far East portion links to the future East Side Trail and existing SR 117 shared roadway.

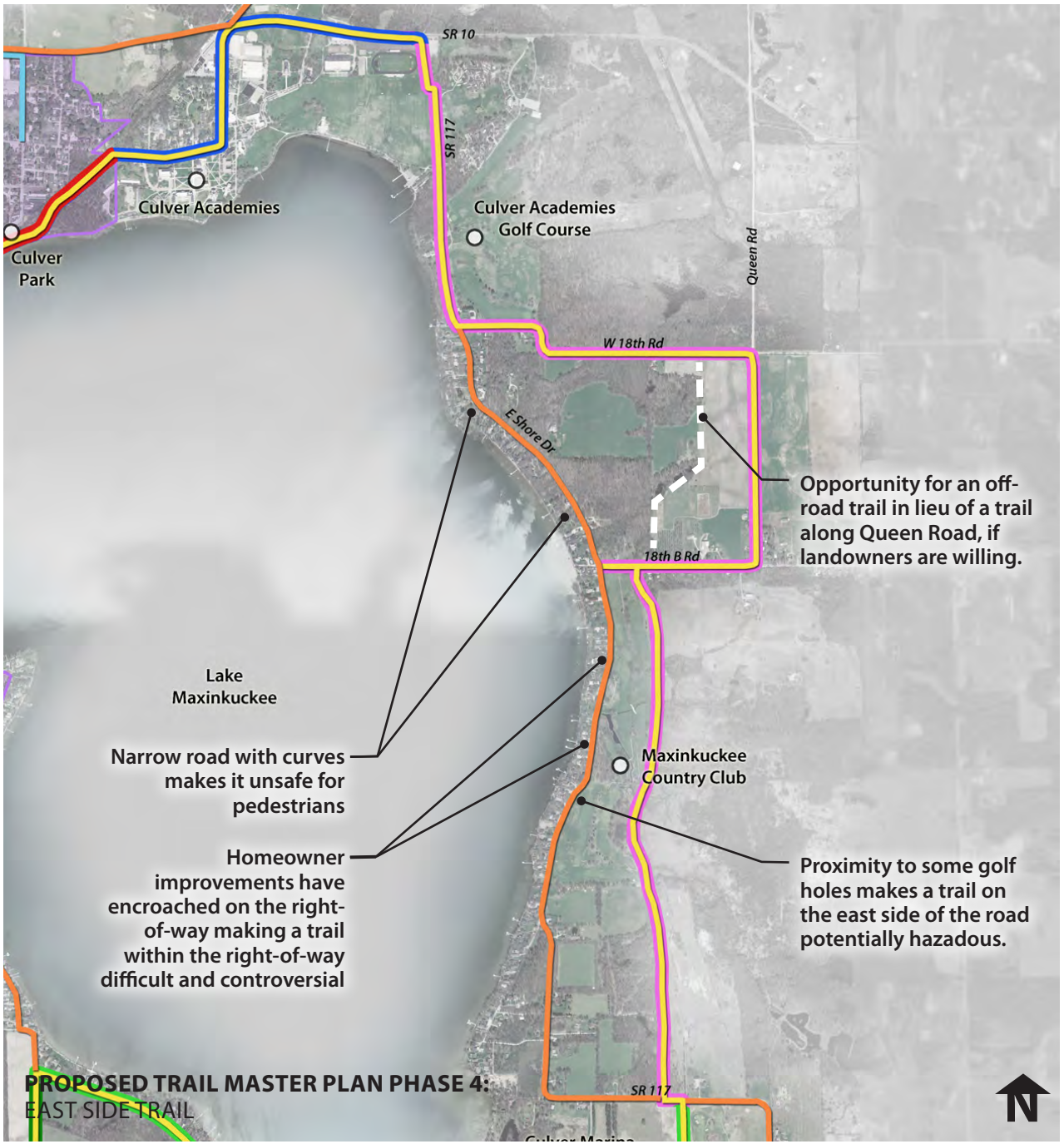
While the Academies is an open campus, administration and faculty had concerns about developing a public trail on the campus water front. A better location for the trail was along the Academy Rd. Parking along the road would be replaced by the trail and additional parking could be provided on campus.



SECTION A: ACADEMY RD PROPOSED TRAIL
PHASE 3 - CULVER ACADEMIES CONNECTION

MAP LEGEND

- Proposed Multi-Use Path
- Proposed Shared Roadway with Signage and Markings
- Proposed Connector Sidewalk
- Town Limits
- Proposed Trailhead or Node
- Section / Perspective Location



PROPOSED TRAIL MASTER PLAN PHASE 4:
EAST SIDE TRAIL

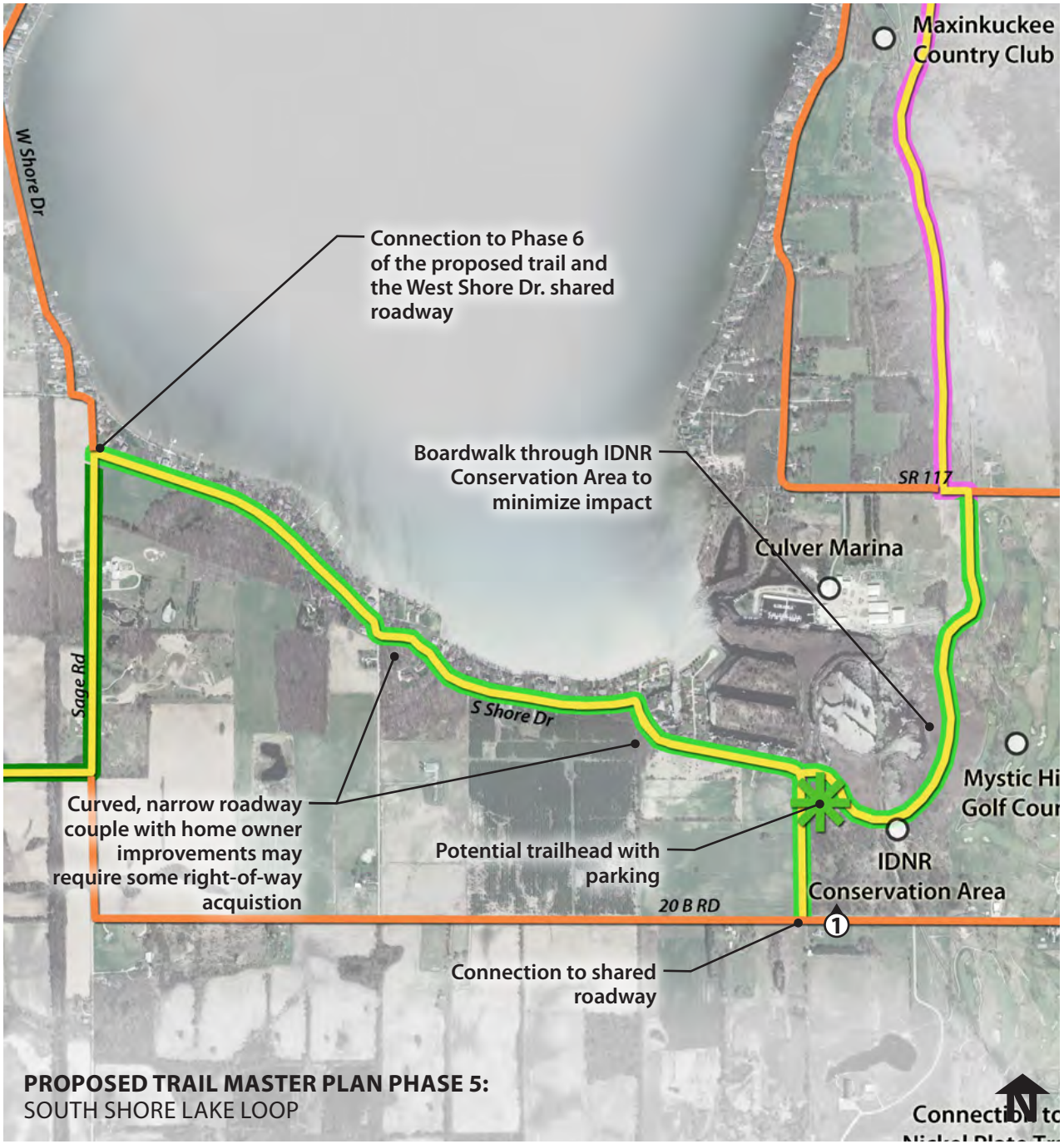
EAST SIDE TRAIL CONNECTIONS

Phase 4 continues the mixed-use trail around the east side of the lake. Utilizing separated on road and off road trails through beautiful property with spectacular views of the lake, this section of trail will be a favorite for users.

East Shore Dr. is currently a popular road for runners and cyclists, but it is unsafe due to terrain and vehicle speed. Routing a trail with in the right-of-way on East Shore Dr. would be difficult due to width, sight lines, and the necessity to have homeowners demolish walls and other improvements that have encroached on the right-of-way. Utilizing pavement markings, signage, and other traffic calming measures on East Shore Dr. to make it a safer shared roadway.

MAP LEGEND

- Proposed Multi-Use Path
- Proposed Shared Roadway with Signage and Markings
- Proposed Connector Sidewalk
- Town Limits
- Proposed Trailhead or Node
- Section / Perspective Location



PROPOSED TRAIL MASTER PLAN PHASE 5:
SOUTH SHORE LAKE LOOP

SOUTH SHORE LAKE LOOP

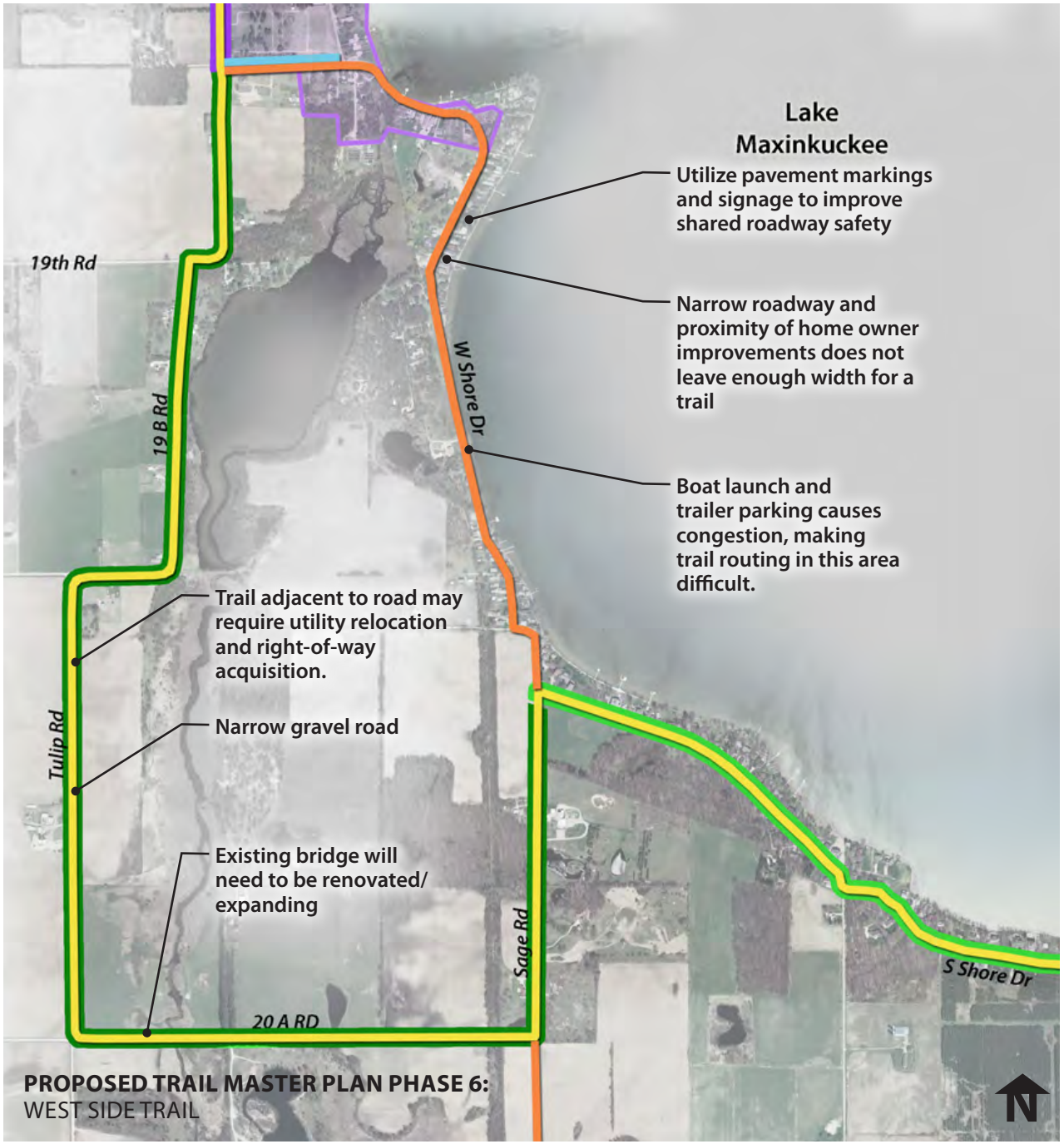
This phase connects East Shore Dr. to West Shore Dr around the south shore of the lake. While this phase wont complete the multi-use trail around the entire lake loop, it will connect to the West Shore shared roadway to complete the loop.

The highlight of phase 5 will be the boardwalk trail through the IDNR Conservation area. This will give users access to the beautiful IDNR property without creating a negative impact on the environment. This area would be an ideal location for a trailhead.

MAP LEGEND

- Proposed Multi-Use Path
- Proposed Shared Roadway with Signage and Markings
- Proposed Connector Sidewalk
- Town Limits
- Proposed Trailhead or Node
- Section / Perspective Location

PHASE 5: SOUTH SHORE LAKE LOOP
IDNR CONSERVATION AREA BOARDWALK PROPOSED TRAIL PERSPECTIVE 1



PROPOSED TRAIL MASTER PLAN PHASE 6:
WEST SIDE TRAIL

WEST SIDE TRAIL

This will be the final phase to complete the lake loop trail. Until this phase is completed, West Shore Dr. shared roadway can serve as the loop trail connection.

Unless private land owners became interested in donating or selling land for the trail development, utilizing 19B Rd., Tulip Rd., and 20A Rd. is the best route through this section. A trail adjacent to these roads will still have some hurdles, such as utility relocation, some property acquisition to expand the right-of-way, and a bridge expansion.

MAP LEGEND

- Proposed Multi-Use Path
- Proposed Shared Roadway with Signage and Markings
- Proposed Connector Sidewalk
- Town Limits
- Proposed Trailhead or Node
- Section / Perspective Location

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CHAPTER 6
IMPLEMENTATION STRATEGY

"BICYCLING IS GOOD FOR CITIES. PROVIDING SAFE, COMFORTABLE, CONVENIENT BICYCLING FACILITIES IS A COST-EFFECTIVE WAY FOR AMERICAN MUNICIPALITIES TO IMPROVE MOBILITY, LIVABILITY AND PUBLIC HEALTH WHILE REDUCING TRAFFIC CONGESTION AND CO2 EMISSIONS."

NATIONAL ASSOCIATION OF CITY TRANSPORTATION OFFICIALS

IMPLEMENTATION TOOLS

The following Federal and State resources highlight funding opportunities available for different components within the Master Plan, including infrastructure improvements and signage. The Federal Transportation Funding Law, MAP-21, consolidated a number of bicycle and pedestrian transportation programs into the Transportation Alternatives program.

Projects funded through this program have funds administered through each State's DOT. Project sponsors are typically responsible for 20% of the project's cost.

While nonprofits, such as a 501.c.3 trails organization, are not eligible to apply as a direct recipient, they may partner with state or local entities that are eligible.

PEDESTRIAN AND BICYCLE FUNDING OPPORTUNITIES:

U.S. Department of Transportation Transit, Highway, and Safety Funds | Revised August 12, 2016

This section outlines potential eligibility for pedestrian and bicycle projects under U.S. Department of Transportation surface transportation funding programs. Additional restrictions may apply. See notes and basic program requirements below, and see program guidance for detailed requirements. Project sponsors should fully integrate nonmotorized accommodation into surface transportation projects. Section 1404 of the Fixing America's Surface Transportation (FAST) Act modified 23 U.S.C. 109 to require federally-funded projects on the National Highway System to consider access for other modes of transportation, and provides greater design flexibility to do so.

PROGRAM-SPECIFIC NOTES:

Federal-aid funding programs have specific requirements that projects must meet, and eligibility must be determined on a case-by-case basis. For example:

- **TIGER:** Subject to annual appropriations.
- **TIFIA:** Program offers assistance only in the form of secured loans, loan guarantees, or standby lines of credit, but can be combined with other grant sources, subject to total Federal assistance limitations.
- **FTA/ATI:** *Project funded with FTA transit funds must provide access to transit. See Bikes and Transit and the FTA Final Policy Statement on the Eligibility of Pedestrian and Bicycle Improvements under Federal Transit Law.*
- **CMAQ Projects:** These projects must demonstrate emissions reduction and benefit air quality. See the CMAQ guidance at *www.fhwa.dot.gov/environment/air_quality/cmaq/* for a list of projects that may be eligible for CMAQ funds. Several activities may be eligible for CMAQ funds as part of a bicycle and pedestrian-related project, but not as a highway project. CMAQ funds may be used for shared use paths, but may not be used for trails that are primarily for recreational use.
- **HSIP Projects:** These projects must be consistent with a State's Strategic Highway Safety Plan and either (1) correct or improve a hazardous road location or feature, or (2) address a highway safety problem.

- **NHPP Projects:** These projects must benefit National Highway System (NHS) corridors.
- **STBG and TA Set-Aside:** Activities marked "$SRTS" means eligible only as an SRTS project benefiting schools for kindergarten through 8th grade. Bicycle transportation nonconstruction projects related to safe bicycle use are eligible under STBG, but not under TA (23 U.S.C. 217(a)).
- **Recreation Trails Program Grant (RTP):** RTP provides funds to the States to develop and maintain recreational trails and trail-related facilities for both nonmotorized and motorized recreational trail uses. RTP must benefit recreational trails, but for any recreational trail use. The RTP is an assistance program of the Department of Transportation's Federal Highway Administration (FHWA). RTP projects are eligible under TA and STBG, but States may require a transportation purpose.
- SRTS: FY 2012 was the last year for SRTS funds, but SRTS funds are available until expended.
- Planning funds must be used for planning purposes, for example:
  - *Maps: System maps and GIS;*
  - *Safety education and awareness: for transportation safety planning;*
  - *Safety program technical assessment: for transportation safety planning;*
  - *Training: bicycle and pedestrian system planning training.*

OTHER FUNDING AND STATE AGENCY PROGRAMS:

- **OCRA Place-Based Investment Fund (PBIF):** A competitive matching grant program administered as a interagency partnership supporting community and economic development projects. Initiatives that promote quality of life, improve tourism experiences, and develop multi-purpose gathering places are targeted.
- **Regional Cities:** Sets a framework for neighboring communities across the state to work together to develop regional visions that are supported by compelling development plans focused on quality of place. Funds for the Northern Indiana appropriation are distributed based on readiness of a project and impact.
- **Stellar Communities:** A multi-agency partnership designed to recognize Indiana's smaller communities that have identified comprehensive community and economic development projects and activities as well as next steps and key partnerships.
- **The Indiana Housing and Community Development Authority (IHCDA):** In conjunction with Patronicity, the IHCDA has announced a place-based crowd granting program called "CreatINg Places". Projects that meet their crowdfunding goals can receive a matching grant from IHCDA of up to $50,000. Local governments and non-profits can submit projects by applying on the Patronicity website. Eligible projects may include but are not limited to: Streetscape beautification and walkability, access to public amenities (pier enhancements), bike & other non-motorized path and related infrastructure, among others.

PEDESTRIAN AND BICYCLE FUNDING OPPORTUNITIES:

Key: $ = Funds may be used for this activity (restrictions may apply). $* = See program-specific notes for restrictions. ~$ = Eligible, but not competitive unless part of a larger project.

Activity or Project Type	Pedestrian and Bicycle Funding Opportunities U.S. Department of Transportation Transit, Highway, and Safety Funds														
	TIGER	TIFIA	FTA	ATI	CMAQ	HSIP	NHPP	STBG	TA	RTP	SRTS	PLAN	NHTSA 402	NHTSA 405	FLTTP
Access enhancements to public transportation (includes benches, bus pads)	$	$	$	$	$		$	$	$						$
ADA/504 Self Evaluation / Transition Plan								$	$	$		$			$
Bicycle plans			$					$	$		$	$			$
Bicycle helmets (project or training related)								$	$SRTS		$		$*		
Bicycle helmets (safety promotion)								$	$SRTS		$				
Bicycle lanes on road	$	$	$	$	$	$	$	$	$		$				$
Bicycle parking	~$	~$	$	$	$		$	$	$	$	$				$
Bike racks on transit	$	$	$	$	$			$	$						$
Bicycle share (capital and equipment; not operations)	$	$	$	$	$		$	$	$						$
Bicycle storage or service centers at transit hubs	~$	~$	$	$	$			$	$						$
Bridges / overcrossings for pedestrians and/or bicyclists	$	$	$	$	$*	$	$	$	$	$	$				$
Bus shelters and benches	$	$	$	$	$		$	$	$						$
Coordinator positions (State or local)					$ 1 per State			$	$SRTS		$				
Crosswalks (new or retrofit)	$	$	$	$	$*	$	$	$	$	$	$				$
Curb cuts and ramps	$	$	$	$	$*	$	$	$	$	$	$				$
Counting equipment			$	$		$	$	$	$	$	$	$*			$
Data collection and monitoring for pedestrians and/or bicyclists			$	$		$	$	$	$	$	$	$*			$
Historic preservation (pedestrian and bicycle and transit facilities)	$	$	$	$				$	$						$
Landscaping, streetscaping (pedestrian and/or bicycle route; transit access); related amenities (benches, water fountains); generally as part of a larger project	~$	~$	$	$			$	$	$						$
Lighting (pedestrian and bicyclist scale associated with pedestrian/bicyclist project)	$	$	$	$		$	$	$	$	$	$				$
Maps (for pedestrians and/or bicyclists)			$	$	$			$	$		$	$*			
Paved shoulders for pedestrian and/or bicyclist use	$	$			$*	$	$	$	$		$				$

ABBREVIATIONS

ADA/504: *Americans with Disabilities Act of 1990 / Section 504 of the Rehabilitation Act of 1973*

TIGER: *Transportation Investment Generating Economic Recovery Discretionary Grant program*

TIFIA: *Transportation Infrastructure Finance and Innovation Act (loans)*

FTA: *Federal Transit Administration Capital Funds*

ATI: *Associated Transit Improvement (1% set-aside of FTA)*

CMAQ: *Congestion Mitigation and Air Quality Improvement Program*

HSIP: *Highway Safety Improvement Program*

NHPP: *National Highway Performance Program*

STBG: *Surface Transportation Block Grant Program*

TA: *Transportation Alternatives Set-Aside (formerly Transportation Alternatives Program)*

RTP: *Recreational Trails Program*

SRTS: *Safe Routes to School Program / Activities*

PLAN: *Statewide Planning and Research (SPR) or Metropolitan Planning funds*

NHTSA 402: *State and Community Highway Safety Grant Program*

NHTSA 405: *National Priority Safety Programs (Nonmotorized safety)*

FLTTP: *Federal Lands and Tribal Transportation Programs (Federal Lands Access Program, Federal Lands Transportation Program, Tribal Transportation Program, Nationally Significant Federal Lands and Tribal Projects)*

PEDESTRIAN AND BICYCLE FUNDING OPPORTUNITIES:

Key: $ = Funds may be used for this activity (restrictions may apply). $* = See program-specific notes for restrictions. ~$ = Eligible, but not competitive unless part of a larger project.

Activity or Project Type	Pedestrian and Bicycle Funding Opportunities U.S. Department of Transportation Transit, Highway, and Safety Funds														
	TIGER	TIFIA	FTA	ATI	CMAQ	HSIP	NHPP	STBG	TA	RTP	SRTS	PLAN	NHTSA 402	NHTSA 405	FLTTP
Pedestrian plans			$					$	$		$	$			$
Recreational trails	~$	~$						$	$	$					$
Road Diets (pedestrian and bicycle portions)	$	$				$	$	$	$						$
Road Safety Assessment for pedestrians and bicyclists						$		$	$			$			$
Safety education and awareness activities and programs to inform pedestrians, bicyclists, and motorists on ped/bike safety								$SRTS	$SRTS		$	$*	$*	$*	
Safety education positions								$SRTS	$SRTS		$		$*		
Safety enforcement (including police patrols)								$SRTS	$SRTS		$		$*	$*	
Safety program technical assessment (for peds/bicyclists)								$SRTS	$SRTS		$	$*	$		
Separated bicycle lanes	$	$	$	$	$	$	$	$	$		$				$
Shared use paths / transportation trails	$	$	$	$	$*	$	$	$	$	$	$				$
Sidewalks (new or retrofit)	$	$	$	$	$	$	$	$	$	$	$				$
Signs / signals / signal improvements	$	$	$	$	$	$	$	$	$		$				$
Signed pedestrian or bicycle routes	$	$	$	$	$		$	$	$		$				$
Spot improvement programs	$	$	$			$	$	$	$	$	$				$
Stormwater impacts related to pedestrian and bicycle projects	$	$	$	$		$	$	$	$	$	$				$
Traffic calming	$	$	$			$	$	$	$		$				$
Trail bridges	$	$			$*	$	$	$	$	$	$				$
Trail construction and maintenance equipment								$RTP	$RTP	$					
Trail/highway intersections	$	$			$*	$	$	$	$	$	$				$
Trailside and trailhead facilities (includes restrooms and water, but not general park amenities; see guidance)	~$*	~$*						$*	$*	$*					$
Training					$	$		$	$	$	$	$*	$*		
Training for law enforcement on ped/bicyclist safety laws								$SRTS	$SRTS		$			$*	
Tunnels / undercrossings for pedestrians and/or bicyclists	$	$	$	$	$*	$	$	$	$	$	$				$

ABBREVIATIONS

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FLTTP: *Federal Lands and Tribal Transportation Programs (Federal Lands Access Program, Federal Lands Transportation Program, Tribal Transportation Program, Nationally Significant Federal Lands and Tribal Projects)*

INDIANA BICYCLE AND PEDESTRIAN RESOURCES

Several organizations around the state serve as both key contributors to bicycle and pedestrian infrastructure projects, or like Friends of Granger Paths, serve as models for advocacy, continued fundraising, and implementation of those projects.

The following pages describe some of these organizations, as they can be important resources while developing a trail system in Culver and surrounding areas.

NATIONAL RESOURCES

The League of American Bicyclists
www.bikeleague.org

GREENWAYS FOUNDATION
www.greenwaysfoundation.org/

The Greenways Foundation is a charitable trust working to promote the growth, enhancement and use of Indiana greenways. To accomplish that, they solicit donations and make grants in support of greenway development, enhancement and operation. The Board of Directors meets monthly and has a total of nine Directors located statewide in Indiana.

Partnerships include: the National Park Service, the Indiana Department of National Resources, Health By Design, and the Indiana Tourism Association.

INDIANA TRAILS FUND
www.indianatrails.org

The Indiana Trails Fund (ITF) is an Indiana corporation, incorporated in 1994, for the purpose of providing a means of acquiring land and holding funds for trail development.

The mission of the ITF is to create trails and greenways throughout the state. This is accomplished through the acquisition, management, and improvement of corridors, the support of local trails organizations, and the education of the public on trails issues.

This organization has worked with several trail nonprofits and advocacy groups including Adams Trail (and Friends of Granger Paths), the Nickle Plate Trail, the Panhandle Pathway Trail in Pulaski County, and several trails throughout central Indiana.

B&O TRAIL ASSOCIATION
www.botrail.org

B&O Trail Association Inc. (BOTA) and Hendricks County Trail Development Association (HCTDA) create recreational trails. Our nonprofit volunteer organizations promote pollution-free transportation alternatives, improve the quality of life, enhance local communities, preserve a passage to our history, and provide opportunities for citizens to enjoy Indiana's natural environment.

Partnerships include: the IU Health System and the Hendricks Regional Health System

FORT WAYNE TRAILS
fwtrails.org

"Enhancing our vibrant and healthy community by developing an ever-expanding network of trails."

Fort Wayne Trails, Inc. is a 501(c)(3) non-profit organization that is focused on serving as a source of economic and community development throughout Northeast Indiana. Fort Wayne Trails' inception is the result of merging three area non-profit trails organizations: Aboite New Trails, the Greenway Consortium and Northwest Allen Trails.

Partnerships include: City of Fort Wayne, Fort Wayne Parks, Bike Fort Wayne, Allen County Government, NIRCC, Little River Wetlands Project, Indiana Trails, Indiana Bicycle Coalition

BICYCLE INDIANA
bicycleindiana.org

Organization that Promotes, Educates, and Advocates for bicycle and pedestrian infrastructure around Indiana. This group works specifically with the State Department of Health and Health By Design organization to bring together resources aimed at making Indiana a bicycle friendly state as well as making safe roadways for all.

Partnerships include the local chapters of the American Planning Association and the American Society of Landscape Architects.

STRATEGIC IMPLEMENTATION MATRIX

Each of the major strategies highlighted on the proposed system maps, as well as the policy strategies, are outlined within the matrix. These were broken down into key components and projects, which were further analyzed, given priority and a potential timeline, and important contributors who can take on lead roles for moving the recommendations forward. This matrix is aimed a providing a general framework to the Master Plan.

Within the Matrix, projects under each strategy were punctuated with short, medium, and long timelines to showcase both quick-win projects, which demonstrate progress to the public, and overall direction, which guides long-term action.

COST ESTIMATE

While project recommendations were made for Strategy 1, 2, and 4 their total scope requires additional study and coordination with other public infrastructure initiatives and projects. The focus of this estimate will be on Strategy 3, with an emphasis on completing the trail system around the lake and creating community connections.

Strategy 3 was broken into 6 primary phases based on impact and priority, which correspond to the Strategic Implementation Matrix breakdown. These phases specifically address the multiuse path with signage, furniture, and lighting estimated in accordance to the recommendations contained in this Master Plan. Siting, Maintenance of Traffic, Design/Engineering, and Construction cost estimates are based on statisfying the minimum state standards.

For a complete breakdown of the cost estimates, please refer to the Appendix.

COST ESTIMATE STRATEGY 3: CREATE COMMUNITY CONNECTIONS - MULTI-USE PATH

PHASE	NAME	COST ESTIMATE
3.1	ACADEMIES TO PARK TO DOWNTOWN	$1,062,683.94
3.2	US 10 TO DOWNTOWN TO WEST SHORE DR.	$1,440,606.73
3.3	CULVER ACADEMIES TO SR 117	$1,096,870.95
3.4	EAST SIDE TRAIL	$2,161,084.31
3.5	SOUTH SIDE TRAIL	$3,106,689.53
3.6	WEST SIDE TRAIL	$2,576,665.75
TOTAL		$11,444,601.21

Town of Culver Bicycle and Pedestrian Master Plan

Strategic Implementation Matrix

			Timeline (in years)		
Strategies and Action Steps	**Lead Role(s)**	**Potential Partners**	**Short**	**Medium**	**Long**
Strategy 1: Active Transportation Through Enhanced Programming and Partnerships					
1.1 Establish Culver Bicycle and Pedestrian Group / Trails 501.c.3	Culver Leaders/Residents	Town of Culver, Businesses, Community Groups	1-2		
1.2 Create a centralized events calendar	Culver Leaders/Residents	Town of Culver		3-5	
1.3 Adopt Planning, Engineering, Education, and Enforcement Policy Recommendations	Town Personnel	Culver Plan and Redev. Commission	1-2		
1.4 Implement Planning, Engineering, Education, and Enforcement Policy Recommendations	Town Personnel	Marshall County, Union Township		3-5	
1.5 Create and utilize website and social media presence to promote network	Town Personnel	Visitors Bureau, Chamber of Commerce		3-5	
Strategy 2: Improve Existing Bicycle and Pedestrian Infrastructure in Culver					
2.1 Proposed SR 10 sidewalk	Town of Culver	MACOG, INDOT, OCRA	1-2		
2.2 Proposed Jefferson Street sidewalks	Town of Culver	MACOG, INDOT, OCRA		3-5	
2.3 Improve pedestrian crossings through paint	Town of Culver	MACOG, INDOT, OCRA	1-2		
2.3 Improve pedestrian crossings through stamped crosswalks and/or bumpouts	Town of Culver	MACOG, INDOT, OCRA		3-5	
2.4 Add wayfinding signs	Town of Culver		1-2		
2.5 Improve lighting within the system	Town of Culver				6-10
2.6 Introduce new site amenities, such as benches and trash receptacles, throughout the network	Town of Culver				6-10
2.7 Replace and repair broken sidewalks and update curb ramps to meet ADA compliance standards	Town of Culver	SRTS Funding, State Grants		3-5	
Strategy 3: Create the Lake Maxinkuckee Loop Trail					
3.1 Park to Downtown Multi-use Path	Town of Culver	MACOG, INDOT, OCRA	1-2		
3.2 Downtown to SR 10 - Ohio Street and Main Street South Multi-use Path	Town of Culver	Culver Community Schools, MACOG, INDOT		3-5	
3.3 Culver Academies Multi-use Path	Town of Culver	Culver Academies, MACOG, INDOT		3-5	
3.4 East Side Multi-use Path	Town of Culver	Marshall County, MACOG, INDOT			6-10
3.5 South Shore Multi-use Path	Town of Culver	Marshall County, MACOG, INDOT, IDNR			6-10
3.6 West Side Multi-use Path	Town of Culver	Marshall County, MACOG, INDOT			11+
3.7 Proposed Trailhead at Culver Park	Town of Culver	Marshall County, OCRA		3-5	
3.8 Proposed Trailhead at IDNR Conservation Area	Town of Culver	Marshall County, MACOG, IDNR		3-5	
3.9 Proposed Shared Roadway with Signage and Markings West Side Loop	Town of Culver	Marshall County	1-2		
3.10 Proposed Shared Roadway with Signage and Markings East Side Loop	Town of Culver	Marshall County	1-2		
Strategy 4: Tie Into Regional Trail System					
4.1 Shared Roadway Southern Connection to Nickel Plate Trail (Rochester)	Marshall County	Fulton County, MACOG, Culver, Rochester		3-5	
4.2 Shared Roadway Connection Along SR 10 and North Connections	Marshall County	Town of Culver, MACOG, Starke County		3-5	
4.3 Multi-use Path Connection to Nickel Plate Trail (Rochester)	Marshall County	Fulton County, MACOG, Culver, Rochester			11+
4.4 Trail Connection to Plymouth	Marshall County	Town of Culver, MACOG, Starke County			11+

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CHAPTER 7
CONCLUSION

"BICYCLING IS POPULAR ACROSS AMERICA AMONG ALL TYPES OF PEOPLE. COMMUNITIES THAT HAVE FOSTERED THAT POPULARITY BY PROVIDING BICYCLE INFRASTRUCTURE FOR TRANSPORTATION AND RECREATION HAVE SEEN CONSIDERABLE ECONOMIC BENEFITS BY ATTRACTING BUSINESSES, TOURISM, AND ACTIVE RESIDENTS."

DARREN FLUSCHE, POLICY DIRECTOR
LEAGUE OF AMERICAN BICYCLISTS

MASTER PLAN SUMMARY

After gathering community feedback and determining the areas of greatest impact, careful consideration was given to feasibility, leadership, potential partners, and general timeline. The resulting priorities include a functional direction that has both internal and external benefits.

Overall, four key strategies were selected for improving the bicycle and pedestrian network around Culver. These strategies met the intiatial project goals, addressed both short and long term projects, and ranged in investment costs. Each strategy was prioritized to capitalize on their location and a projects' ability to implement the objectives.

These four strategies include:

- Enhance programming, policies, and partnerships.
- Improve existing bicycle and pedestrian infrastructure in Culver.
- Create community connections through a phased multi-use path and shared roadway system.
- Tie into the regional trail network.

CLOSING THOUGHTS

From the early stages of this process, the community was engaged and excited for improving the bicycle and pedestrian infrastructure in and around Culver. Public support and feedback was critical to the formation of this plan. Through stakeholder meetings, a public meeting, an online wiki-mapping site, and discussions with residents, many great ideas were shared and explored. People in Culver are proud of their town, Lake Maxinkuckee, Culver Academies, Culver Park, and other great amenities available.

This Culver Bicycle and Pedestrian Master Plan strives to build on the great resources available, making them more connected, usable, and visible. It establishes a vision for improved connectivity and accessibility that attracts people to the community. This vision includes a network of existing and new facilities that focus on Lake Maxinkuckee, neighborhoods, schools, parks, and other amenities that make Culver unique. The proposed projects will provide alternative transportation options, focusing on bicycle and foot traffic, that also improve community health, environmental health, and opportunities for economic growth.

The strategies and projects identified within this report, while not exhaustive, provide a roadmap for creating a more pedestrian and bicycle friendly community in and around Culver. In implementing each of the identified components, the Town of Culver gains a stronger, more resilient bicycle and pedestrian system that will dramatically improve the overall public health, safety, and welfare for the entire region.

APPENDICIES AND RESOURCES

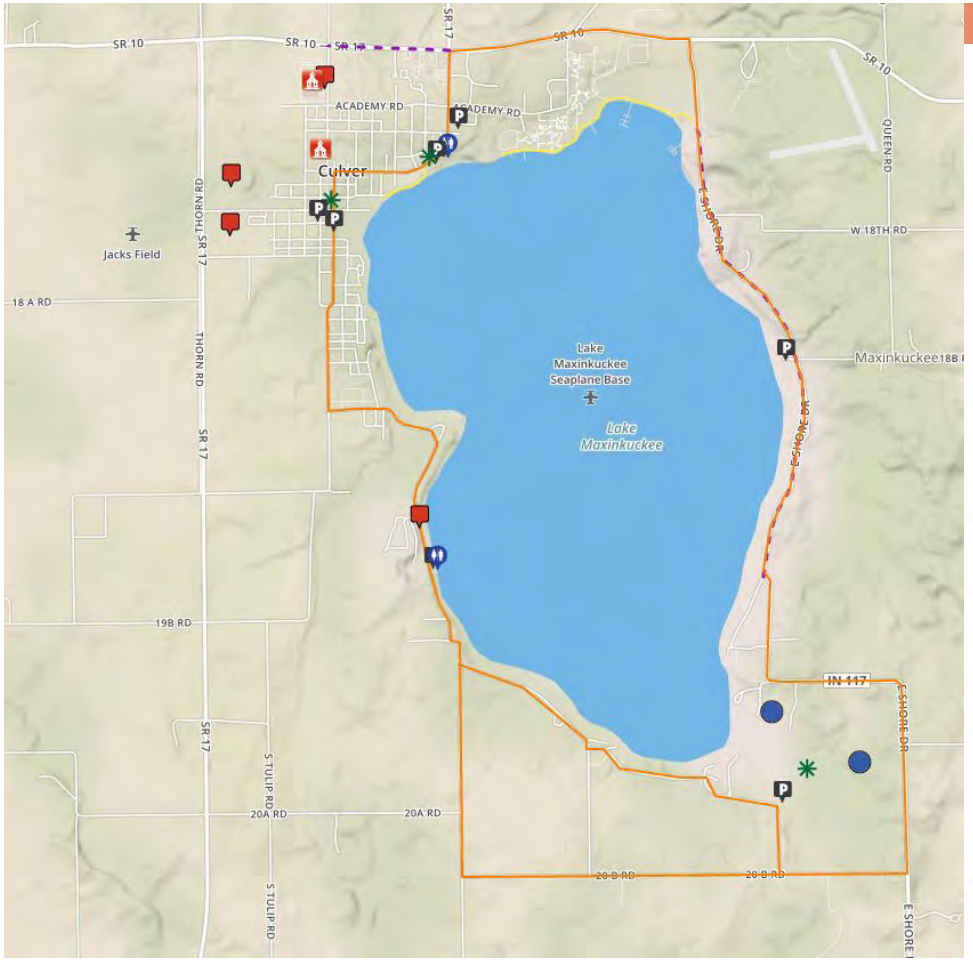
"CITIES FAIL AND SUCCEED AT THE SCALE OF HUMAN INTERACTION"

ETHAN KENT
PROJECT FOR PUBLIC SPACES

APPENDICIES - A

RESOURCE OVERVIEW

Throughout the planning process the project team utilized community feedback, information from town officials, wikimap inventory, and a selection of key resources to develop this Master Plan. This information gave the team a clear understanding of the town's context (neighborhood, history, adjacent areas, connectivity, etc) helping foster informed decision making for the Master Plan. Contained herein are the raw data which informed the decision making process.



LEGEND

Routes

- Existing - Separated Trails
- Existing - Signed Route
- Existing - Walking Path
- Proposed - Bike Lane
- Proposed - Separated Trail
- Proposed - Shared Route
- Proposed - Sidewalk
- Suggested Route - All Types

Points

- Comment
- Existing Amenities
- Existing Trailhead
- Parks
- Proposed Trailhead
- Public Parking
- Public Restrooms
- Repair Needed
- Schools

WIKIMAPPING SUMMARY

http://wikimapping.com/wikimap/Culver-Bicycle-Pedestrian-Master-Plan.html

Wikimapping - online resource that allowed for broad inventory of assets within the project area. It also provided an extended opportunity for public feedback on bicycle and pedestrian opportunities.

APPENDICIES - B

PUBLIC INPUT SUMMARY

PROBLEM AREAS/ NEEDS

- *Access to Culver Academies campus – concern*
- *Strictly path – no exercise stations*
- *Academy/ hwy 10 – traffic*
- *Cost of reconfiguring roadways and sidewalks to widen/ accommodate the trail*
- *Lake property access issues*
- *Avoid academy student pedestrian traffic*
- *Busy weekend traffic if it is shared with cars*
- *No golf carts*
- *Safety in remote areas*
- *Narrow areas on West shore*
- *Can the old railroad bed be used?*
- *Public road needs wider shoulders*
- *Near public access*
- *East shore: tight*
- *Highways: how to get it done?*
- *Concerned about trail going through park on feeding into Washington St. – a lot of traffic passing through a residential area*
- *A trail along the road around the lake would be costly*
- *You can't see the water anyhow because of the houses. Run the trails through the country side – it's beautiful too*
- *How much will it cost?*
- *Access and conflict*
- *Private property*
- *Maintenance (on going) of trail*
- *Professional bikers*
- *Auto speeding around lake roads*
- *I am concerned the path from the park to town – if opened to bikes, it will be inhospitable to walkers/ runners*
- *Funding*
- *People will complain regardless*
- *Upkeep and litter pick up*
- *How will it be paid for?*
- *Maintenance costs?*
- *How covered?*
- *State roads*
- *Public access*
- *Mirrors on curves?*
- *If at all possible – a complete circle around the lake that is car and cart free*
- *Public access area west shore is a problem – hills, curves*
- *South West shore Dr. is too tight, go around lost lake and connect to South Main St. – pretty view*
- *Adequate right of way*
- *Do not favor lights*
- *Safety*
- *Hygiene (porta – potties)*
- *South shore 900 – 1000 block of East shore is tight*
- *Need trails for safety*
- *Public beach gets very crowded during summer with cars and people. How to avoid this?*
- *Trails big enough for people to leisurely bike next to each other or "pass" without going into traffic*
- *Golf carts will be an issue*
- *Needed width will be difficult to get with homeowners along the lake*

POLICIES AND ENFORCEMENT

- *Absolutely no golf carts*
- *No camping*
- *All uses – golf cart trail to all shopping, wider path with passing lane*
- *Lights in darker areas, maybe security cameras here and there*
- *No motorbikes or motorcycles*
- *Trails lit around lake/ down Main St.*
- *Trails for walking and bikes*
- *Designated family/ kid friendly verses training in certain spots (especially during busy months – around the public beach is too busy for bikes)*
- *Nothing motorized on trail*
- *Help "phones" periodically*
- *Multi directional*
- *Must depend on courtesy*
- *No golf carts*
- *Respect private property*
- *Shared use design – bike, run, walk, roller blade*
- *Golf carts are going to be an issue even if entry points are blocked at access points*
- *No motorized vehicles, including no golf carts*
- *Enforce picking up after pets*
- *Safety call system*
- *I don't think the trails should be let Golf carts should not be on paths*
- *Would prefer separate trails from the road but that is also difficult to do*
- *No skateboards*
- *Law enforcement*
- *No littering*
- *Police your dog (pick up dog poop/on leash)*
- *Noise control?*
- *I would like dedicated bike paths, sharing the road with cars and trucks is dangerous*
- *Golf carts – on trail or on road*
- *Clearly mark trails and rules of the road and trails*
- *Easy enforcement – a lot of out of towners*
- *Wide multi use trail with middle lane marked*
- *No golf carts*
- *Pedestrians not in way of bikes*
- *Proper lookout*
- *Self-enforced*
- *Unlit*
- *No golf carts*
- *Limited lighting in order to see starry sky*
- *No golf carts or skate boards*
- *No lighting*
- *No littering*
- *Shared use*
- *Lighting: yes for safety*
- *Golf carts: only if path is wide enough for a cart and bike*
- *Dedicated golf cart trail*
- *Wider to accommodate all cart and bike – I think everyone can share*
- *Lighting in some areas*
- *Motion lights/ security cameras*
- *No motor vehicles other than emergency vehicles or motorized wheelchairs/ scooters*
- *Prefer no additional lights other than what is needed if there were no trail*
- *Keep trail in line with the area…i.e. wetlands, etc.*
- *No skateboards/ rollerblades or golf carts on paths*
- *True multiuse trail – like the one along the academy shore*
- *Enforced by volunteers on bikes?*
- *No golf carts*
- *Separate route for serious cyclists*
- *Posted rules*
- *Limit: no skateboards, golf carts, skates*
- *Both shared with roads and other separate path when possible*

- *No lighting*
- *Trail through town is a residential neighborhood and should be quiet at night*
- *Allow golf carts*
- *Area for golf cart parking at park and downtown*
- *Non-motorized (golf carts, scooters, etc.)*
- *Bike lane/ wider shoulders on public roads*
- *Engage all skaters*
- *Pooper pickup*

DESTINATIONS AND CONNECTIONS

- *Eventual connection to other bike trails would be ideal*
- *Ride my bike to work – Elkay connect to Rochester and Winamac*
- *Nickel plate bike walk to park*
- *Park*
- *By schools: both views of lake*
- *Downtown*
- *Rochester's trail*
- *Possibly connect to Monterey*
- *Around lake – viewing beautiful homes; through wetlands*
- *Bike trail to Bass Lake (this for training biking)*
- *Through park, downtown for family and kids*
- *Somehow connect school and park safely*
- *Around lake Max*
- *Through town – lake shore/ Main St.*
- *Connect Culver to: Argos – RT. 10, Plymouth – 17, Rochester – 17*
- *Eventual trail to Monterey and then to Winamac and to Bass Lake*
- *Trail linking Culver to Plymouth*
- *Around the lake and then town*
- *Maybe something through wetland area in SE corner of lake – preserving nature*
- *Connect lake and town*
- *Plymouth to Culver*
- *Culver to North Judson*
- *Academy – lake – downtown*
- *Cemetery/ south shore*
- *Marina/ around the lake*
- *Historical stops (heritage can help with signage, see Jeff Kenney)*
- *Photo stops*
- *Wildlife observation*
- *Argos*
- *Ultimately a destination around the lake. Most definitely as many trails or walks coming into town*
- *Connect to Rochester and Plymouth*
- *Trails from Culver to Plymouth, Rochester, North Judson, Bass Lake*
- *Past lost lake*
- *Town park*
- *To eat*
- *Like to see it connect to other trails around area and state*
- *Connect regionally*
- *Academy*
- *Businesses on 10*
- *Downtown*
- *Access to a larger trail to trail system, Plymouth, Rochester, etc.*
- *Culver town from lakeside*
- *Through town and around lake. It would be nice to connect to other trails and possibly pass by interesting areas where people would visit or go eat, farmers market, etc.*
- *Pass historical spots – chief Menominee*
- *Around the lake*
- *Park to downtown*
- *Park to academy*
- *Ideally around the lake and down to Rochester's trail and even to South Bend's trail?*
- *A safe route through town – a lane for bikes on either side or perhaps its own unique trail*
- *Drive to and from the academy*
- *Side walk around the lake as close to water as possible through natural area, ponds, woods, streams, etc.*

WHY TRAILS? GOALS AND INTENDED USE

- *Yes to the trail used by children, grandchildren in summer to run, walk, bike*
- *A wood walk through the trail in park and trail to academy*
- *Improve Culver economy*
- *Use for exercise*
- *Economic growth*
- *Lifestyle enhancement or Culver*
- *Attract families/ millennials*
- *Bring more activity to Culver form outside visitors*
- *Encourage walking and cycling for heath and fun*
- *Bike/walk around the lake safely – dedicated lane*
- *Why trails – increase visitors to town, economic development*
- *I would use the trails for walking safety*
- *Bring outside people to Culver running walking with family, riding bikes with family (kids) riding (competitive) training purposes, running (training)*
- *Conducive to exercise and not having to fight traffic or stop often at intersections with bikes*
- *To provide a safe route in our community that allows for a route to walk, run, bike*
- *Quality of life*
- *Safety*
- *Hospitality and tourism*
- *Would like a golf cart trail that is safe and off roadways*
- *Walking and walking dog*
- *Scenery*
- *Like to see a trail around lake for bikes and walking*
- *Town to lake - bike and walk*
- *Around lake – paved (bike) avoid traffic*
- *For fun – family outings*
- *Outside – exercise (walking, biking, or running)*
- *Safety – I bike around the lake and there are quite a few dangerous passages on the current route*
- *Why – to introduce more people to all of the amenities of the Culver area*
- *Use – bicycling (recreational) and walking*
- *Running - 1/4 mile markers, water fountains, porta – potties*
- *Family/ outdoor time/ fitness*
- *Exercise and relaxation*
- *Walking*
- *Safety - Existing town sidewalks are unsafe, traffic around the lake makes road use dangerous*
- *Bicycling*
- *Safety – biking around the lake is very dangerous. It's just a matter of time before someone gets hit.*
- *Designated trails may encourage more physical activity- whether walking or biking*
- *Safe place for people to bike, run, walk, especially kids*
- *A road bike dedicated lane around the lake, through town and connecting to Argos, Plymouth, and Rochester*

ADDITIONAL RESOURCES

Pedestrian and Bicycle Infrastructure: A National Study of Employment Impacts
http://bikeleague.org/sites/default/files/PERI_Natl_Study_June2011.pdf

NACTO Urban Bikeway Design Guide
http://nacto.org/publication/urban-bikeway-design-guide/

AASHTO Guide For The Development of Bicycle Facilities, 4th Edition
http://www.transportation.org/

National Complete Streets Coalition: Smart Growth America
http://www.smartgrowthamerica.org/complete-streets

Culver-Union Township Public Library "Culver Through The Years": 2014
http://www.culver.lib.in.us/culver_photos_latest.htm#photos

Ada Transition Plan: Ada Standards For Accessible Design
http://www.ada.gov/2010ADAstandards_index.htm

Indiana Design Manual: 2013
http://www.in.gov/indot/design_manual/design_manual_2013.htm

Proposed Guidelines For Pedestrian Facilities In The Public Right-Of-Way: Prowag 2011
https://www.access-board.gov/guidelines-and-standards/streets-sidewalks/public-rights-of-way/proposed-rights-of-way-guidelines

Manual On Uniform Traffic Control Devices
http://mutcd.fhwa.dot.gov/

Safety Effects Of Marked Versus Unmarked Crosswalks At Uncontrolled Locations: Final Report And Recommended Guidelines (2005)
https://www.fhwa.dot.gov/publications/research/safety/04100/04100.pdf

Fishers Bicycle and Pedestrian Master Plan - Fishers, IN
http://www.fishers.in.us/DocumentCenter/View/2551

Richmond Bicycle and Pedestrian MP
http://www.richmondindiana.gov/Our_Government/Departments/Metropolitan_Development/Planning_and_Zoning/Bicycle_Pedestrian_Master_Plan.htm

Town of Culver

Multi-Use Trail: Academy to Park to Downtown Segment (0.84 Miles)

September 2016

Description	Unit	Unit Cost	Quantity	Total Cost
Common Excavation	CYS	$ 15.00	2600	$ 39,000.00
Curb Removal	LF	$ 10.00	1146	$ 11,460.00
Borrow	CYS	$ 20.00	750	$ 15,000.00
Subgrade Treatment, Type III	SYS	$ 5.00	4720	$ 23,600.00
Compacted Aggregate Base	Tons	$ 30.00	395	$ 11,850.00
Concrete Trail	SYS	$ 40.00	3320	$ 132,800.00
PCCP For Approaches, 6"	SYS	$ 55.00	180	$ 9,900.00
HMA Surface	Tons	$ 90.00	175	$ 15,750.00
HMA Intermediate	Tons	$ 70.00	350	$ 24,500.00
Crosswalk Treatment	SYS	$ 75.00	65	$ 4,875.00
Concrete Curb and Gutter	LF	$ 25.00	1210	$ 30,250.00
Trail Signage	LS	$ 10,000.00	1	$ 10,000.00
Storm Sewer Adjustments	LS	$ 20,000.00	1	$ 20,000.00
Sodding	SYS	$ 5.00	630	$ 3,150.00
Landscape	LS	$ 15,000.00	1	$ 15,000.00
Benches	Each	$ 2,000.00	4	$ 8,000.00
Lighting	LS	$ 90,000.00	1	$ 90,000.00
Maintenance of Traffic	LS	$ 15,000.00	1	$ 15,000.00
Utility Relocation	LS	$ 20,000.00	1	$ 20,000.00
Right of Way Eng/Services	LS	$ 50,000.00	1	$ 50,000.00
Right of Way Acquisition	LS	$ 20,000.00	1	$ 20,000.00
Site Clearing/Erosion Control (3%)	LS			$ 15,004.05
Mobilization/Demobilization (5%)	LS			$ 25,006.75
Construction Engineering (1%)	LS			$ 5,001.35
Topographic Survey & LCRSP	LS	$ 50,000.00	1	$ 50,000.00
Environmental Services	LS	$ 10,000.00	1	$ 10,000.00
Trail Design/Engineering Plans	LS	$ 85,000.00	1	$ 85,000.00
Construction Administration	LS	$ 90,000.00	1	$ 90,000.00
Subtotal				**$ 850,147.15**
Contingency (25%)				$ 212,536.79
Grand Total				**$ 1,062,683.94**

Town of Culver

Multi-Use Trail: US 10 to Downtown to W. Shore Dr. Segment (1.42 Miles)

September 2016

Description	Unit	Unit Cost	Quantity	Total Cost
Common Excavation	CYS	$ 15.00	3350	$ 50,250.00
Curb Removal	LF	$ 10.00	2000	$ 20,000.00
Borrow	CYS	$ 20.00	833	$ 16,660.00
Subgrade Treatment, Type III	SYS	$ 5.00	9300	$ 46,500.00
Compacted Aggregate Base	Tons	$ 30.00	1100	$ 33,000.00
Concrete Trail	SYS	$ 40.00	7850	$ 314,000.00
PCCP For Approaches, 6"	SYS	$ 55.00	350	$ 19,250.00
Drainage	LS	$ 25,000.00	1	$ 25,000.00
Concrete Curb and Gutter	LF	$ 25.00	2200	$ 55,000.00
Trail Signage	LS	$ 10,000.00	1	$ 10,000.00
Storm Sewer Adjustments	LS	$ 30,000.00	1	$ 30,000.00
Sodding	SYS	$ 5.00	3800	$ 19,000.00
Landscape	LS	$ 15,000.00	1	$ 15,000.00
Benches	Each	$ 2,000.00	2	$ 4,000.00
Lighting	LS	$ 60,000.00	1	$ 60,000.00
Maintenance of Traffic	LS	$ 20,000.00	1	$ 20,000.00
Utility Relocation	LS	$ 30,000.00	1	$ 30,000.00
Site Clearing/Erosion Control (3%)	LS			$ 23,029.80
Mobilization/Demobilization (5%)	LS			$ 38,383.00
Construction Engineering (1%)	LS			$ 7,676.60
Topographic Survey & LCRSP	LS	$ 60,000.00	1	$ 60,000.00
Environmental Services	LS	$ 10,000.00	1	$ 10,000.00
Trail Design/Engineering Plans	LS	$ 100,000.00	1	$ 100,000.00
Construction Administration	LS	$ 110,000.00	1	$ 110,000.00
Subtotal				**$ 1,116,749.40**
Inflation (4%)				$ 44,669.98
Contingency (25%)				$ 279,187.35
Grand Total				**$ 1,440,606.73**

Town of Culver

Multi-Use Trail Phase 3: Culver Acadamies to SR 117 (1 mile)

September 2016

Description	Unit	Unit Cost	Quantity	Total Cost
Common Excavation	CYS	$ 15.00	2400	$ 36,000.00
Curb Removal	LF	$ 10.00	2600	$ 26,000.00
Borrow	CYS	$ 20.00	750	$ 15,000.00
Subgrade Treatment, Type III	SYS	$ 5.00	7040	$ 35,200.00
Compacted Aggregate Base	Tons	$ 30.00	780	$ 23,400.00
Concrete Trail	SYS	$ 40.00	3180	$ 127,200.00
PCCP For Approaches, 6"	SYS	$ 55.00	120	$ 6,600.00
1.5" HMA Surface	Tons	$ 90.00	220	$ 19,800.00
3" HMA Intermediate	Tons	$ 70.00	440	$ 30,800.00
Concrete Curb and Gutter	LF	$ 25.00	2600	$ 65,000.00
Storm Sewer Adjustments	LS	$ 30,000.00	1	$ 30,000.00
Sodding	SYS	$ 5.00	1500	$ 7,500.00
Landscape	LS	$ 15,000.00	1	$ 15,000.00
Benches	Each	$ 2,000.00	2	$ 4,000.00
Lighting	LS	$ 50,000.00	1	$ 50,000.00
Maintenance of Traffic	LS	$ 12,000.00	1	$ 12,000.00
Utility Relocation	LS	$ 10,000.00	1	$ 10,000.00
Right of Way Eng/Services	LS	$ 35,000.00	1	$ 35,000.00
Right of Way Acquisition	LS	$ 15,000.00	1	$ 15,000.00
Site Clearing/Erosion Control (3%)	LS			$ 15,405.00
Mobilization/Demobilization (5%)	LS			$ 25,675.00
Construction Engineering (1%)	LS			$ 5,135.00
Topographic Survey & LCRSP	LS	$ 45,000.00	1	$ 45,000.00
Environmental Services	LS	$ 10,000.00	1	$ 10,000.00
Trail Design/Engineering Plans	LS	$ 75,000.00	1	$ 75,000.00
Construction Administration	LS	$ 85,000.00	1	$ 85,000.00
Subtotal				**$ 824,715.00**
Inflation (8%)				$ 65,977.20
Contingency (25%)				$ 206,178.75
Grand Total				**$ 1,096,870.95**

Town of Culver

Multi-Use Trail Phase 4: East Side Trail (3.5 Miles)

September 2016

Description	Unit	Unit Cost	Quantity	Total Cost
Common Excavation	CYS	$ 15.00	10820	$ 162,300.00
Borrow	CYS	$ 20.00	2700	$ 54,000.00
Subgrade Treatment, Type III	SYS	$ 5.00	24350	$ 121,750.00
Drainage	LS	$ 40,000.00	1	$ 40,000.00
Compacted Aggregate Base	Tons	$ 30.00	3500	$ 105,000.00
PCCP For Approaches, 6"	SYS	$ 55.00	700	$ 38,500.00
1.5" HMA Surface	Tons	$ 90.00	1675	$ 150,750.00
3" HMA Intermediate	Tons	$ 70.00	3905	$ 273,350.00
Seeding	SYS	$ 1.00	12170	$ 12,170.00
Landscape	LS	$ 10,000.00	1	$ 10,000.00
Benches	Each	$ 2,000.00	2	$ 4,000.00
Maintenance of Traffic	LS	$ 15,000.00	1	$ 15,000.00
Utility Relocation	LS	$ 20,000.00	1	$ 20,000.00
Right of Way Eng/Services	LS	$ 50,000.00	1	$ 50,000.00
Right of Way Acquisition	LS	$ 70,000.00	1	$ 70,000.00
Site Clearing/Erosion Control (3%)	LS			$ 30,204.60
Mobilization/Demobilization (5%)	LS			$ 50,341.00
Construction Engineering (1%)	LS			$ 10,068.20
Topographic Survey & LCRSP	LS	$ 80,000.00	1	$ 80,000.00
Environmental Services	LS	$ 20,000.00	1	$ 20,000.00
Trail Design/Engineering Plans	LS	$ 120,000.00	1	$ 120,000.00
Construction Administration	LS	$ 140,000.00	1	$ 140,000.00
Subtotal				**$ 1,577,433.80**
Inflation (12%)				$ 189,292.06
Contingency (25%)				$ 394,358.45
Grand Total				**$ 2,161,084.31**

Town of Culver

Multi-Use Trail Phase 5: South Side Trail (1.75 Miles)

September 2016

Description	Unit	Unit Cost	Quantity	Total Cost
Common Excavation	CYS	$ 15.00	4800	$ 72,000.00
Borrow	CYS	$ 20.00	1600	$ 32,000.00
Subgrade Treatment, Type III	SYS	$ 5.00	12300	$ 61,500.00
Compacted Aggregate Base	Tons	$ 30.00	1370	$ 41,100.00
Drainage	LS	$ 30,000.00	1	$ 30,000.00
Boardwalk	LF	$ 600.00	1600	$ 960,000.00
PCCP For Approaches, 6"	SYS	$ 55.00	100	$ 5,500.00
1.5" HMA Surface	Tons	$ 90.00	850	$ 76,500.00
3" HMA Intermediate	Tons	$ 70.00	1975	$ 138,250.00
Seeding	SYS	$ 1.00	4200	$ 4,200.00
Landscape	LS	$ 10,000.00	1	$ 10,000.00
Benches	Each	$ 2,000.00	6	$ 12,000.00
Maintenance of Traffic	LS	$ 8,000.00	1	$ 8,000.00
Utility Relocation	LS	$ 10,000.00	1	$ 10,000.00
Right of Way Eng/Services	LS	$ 40,000.00	1	$ 40,000.00
Right of Way Acquisition	LS	$ 85,000.00	1	$ 85,000.00
Site Clearing/Erosion Control (3%)	LS			$ 43,831.50
Mobilization/Demobilization (5%)	LS			$ 73,052.50
Construction Engineering (1%)	LS			$ 14,610.50
Topographic Survey & LCRSP	LS	$ 65,000.00	1	$ 65,000.00
Environmental Services	LS	$ 30,000.00	1	$ 30,000.00
Trail Design/Engineering Plans	LS	$ 150,000.00	1	$ 150,000.00
Construction Administration	LS	$ 180,000.00	1	$ 180,000.00
Subtotal				**$ 2,142,544.50**
Inflation (20%)				$ 428,508.90
Contingency (25%)				$ 535,636.13
Grand Total				**$ 3,106,689.53**

Town of Culver

Multi-Use Trail Phase 6: West Side Trail (3.1 Miles)

September 2016

Description	Unit	Unit Cost	Quantity	Total Cost
Common Excavation	CYS	$ 15.00	9700	$ 145,500.00
Borrow	CYS	$ 20.00	2400	$ 48,000.00
Subgrade Treatment, Type III	SYS	$ 5.00	21900	$ 109,500.00
Compacted Aggregate Base	Tons	$ 30.00	2430	$ 72,900.00
Drainage	LS	$ 50,000.00	1	$ 50,000.00
Bridge Expansion/Rehab	LS	$ 125,000.00	1	$ 125,000.00
PCCP For Approaches, 6"	SYS	$ 55.00	140	$ 7,700.00
1.5" HMA Surface	Tons	$ 90.00	1500	$ 135,000.00
3" HMA Intermediate	Tons	$ 70.00	3500	$ 245,000.00
Seeding	SYS	$ 1.00	10900	$ 10,900.00
Landscape	LS	$ 10,000.00	1	$ 10,000.00
Benches	Each	$ 2,000.00	2	$ 4,000.00
Maintenance of Traffic	LS	$ 15,000.00	1	$ 15,000.00
Utility Relocation	LS	$ 120,000.00	1	$ 120,000.00
Right of Way Eng/Services	LS	$ 50,000.00	1	$ 50,000.00
Right of Way Acquisition	LS	$ 80,000.00	1	$ 80,000.00
Site Clearing/Erosion Control (3%)	LS			$ 32,955.00
Mobilization/Demobilization (5%)	LS			$ 54,925.00
Construction Engineering (1%)	LS			$ 10,985.00
Topographic Survey & LCRSP	LS	$ 70,000.00	1	$ 70,000.00
Environmental Services	LS	$ 20,000.00	1	$ 20,000.00
Trail Design/Engineering Plans	LS	$ 115,000.00	1	$ 115,000.00
Construction Administration	LS	$ 130,000.00	1	$ 130,000.00
Subtotal				**$ 1,662,365.00**
Inflation (30%)				$ 498,709.50
Contingency (25%)				$ 415,591.25
Grand Total				**$ 2,576,665.75**

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